Focus On Student Learning - Instructional Strategies Series

Book Two: 60 Formative Assessment Strategies

By Natalie Regier, M. Ed.

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Note to Teachers

Focus on Student Learning is a series of teaching resources created to support teachers and save them time. Each booklet within the series takes one aspect of instruction and suggests multiple ways of using that instruction practice in the classroom. Book Two: 60 Formative Assessment Strategies provides teachers with a variety of strategies to gather information about their students during instruction.

Who is Natalie Regier?

First and foremost, I am a teacher. I have spent over 20 years in the classroom and have worked as a regular classroom teacher, a special educator, a vice principal and a learning coordinator. I have always been interested in finding ways to help students succeed in school. My search for knowledge to increase student learning has taken me to places like Edmonton, Boston, Orlando, and Las Vegas where I attended conferences and talked with educators from all over the world. As teachers, we all have one thing in common. We are searching for ways to help our students succeed in this ever-changing world. Helping every student in our classroom achieve is a challenge. I am continually searching for ways to support teachers with this challenge.

I am also a writer. Over the years, I have written over 40 teaching resources for *Davies and Johnson* and *Rainbow Horizons*. I enjoy writing and especially enjoy writing for teachers. I know how hectic the life of a teacher is and that time is a precious commodity. I am now dedicating my time to searching for information and creating resources to support teachers in the classroom. There are many changes occurring in education and teachers need to keep up with new curriculums, research-based instructional practices, and ways to increase the achievement level of their students. The teaching resources I create support teachers in understanding and implementing the changes in our education systems.

To learn more about my teaching resources, workshops, coaching and consulting visit my website at: www.regiereducationalresources.com

Let me know what type of resources I could offer that would support you in the classroom and save you time searching for ideas. Contact me at: natalie@regiereducationalresources.com

How does assessment fit into instruction?

Assessment and instruction go hand in hand in a classroom that focuses on the student. Teachers need to use a variety of different strategies to assess student readiness for a particular unit of study and to plan their instruction around the needs the students demonstrate. Ongoing assessment of student learning is an important part of the planning process.

There are three main types of assessment. They are preassessment, formative assessment, and summative assessment. This booklet focuses on strategies that teachers can use to formatively assess their students.

	Preassessment	Formative Assessment	Summative Assessment
What is it?		gathers information	Assessment that shows what students have learned.
IW nen is it lised /	Before a lesson or new unit of study.		At the end of a lesson or unit of study.
Why is it used?	istilidents and to inform	inrogress and to make	To provide evidence of what students learned.

What is formative assessment?

Formative assessment is a process that uses informal assessment strategies to gather information on student learning. Teachers determine what students are understanding and what they still need to learn to master a goal or outcome. Strategies used to gather formative assessment information take place during regular class instruction as formative assessment and instruction are closely linked. Most formative assessment strategies are quick and easy to use and fit seamlessly into the instruction process. The information gathered is never marked or graded. Descriptive feedback may accompany a formative assessment to let students know whether they have mastered an outcome or whether they require more practice.

When are formative assessment strategies used?

Formative assessment strategies are used throughout a unit of study. They are linked to the instruction and focus on discovering what students know and need to know about the end goal or outcome. Teachers use formative assessment during the learning process and use the information to make adjustments to their instruction to better satisfy learner needs. Using formative assessment over the course of a unit will provide teachers with information on the learning processes of their students. Teachers can use one assessment strategy, change or adapt the instruction, and then reassess using the same strategy or a different one to determine if the instructional practice is impacting student achievement.

Why are formative assessment strategies used?

Formative assessment strategies are used to check for understanding of student learning and to make decisions about current and future instruction. Through formative assessment, teachers can

discover the rate at which students are learning, the current knowledge of students, what information or skills students still need to learn, and whether the learning opportunities they are providing for students is effective or if they need to change or adapt their instruction. Results of formative assessment drive instruction. If students are doing well and progressing as expected, teachers continue with their current instruction practices. If students are not progressing as expected and are missing key information or skills, teachers plan other learning opportunities to help students attain the information or skills they need to be successful.

During a unit on measurement in math, teachers may set up demonstration stations for students to show what they have learned using standard measures studied throughout the unit. As students participate in the demonstration stations, teachers focus on the process the students are using to attain a solution, as well as the solution itself.

How do I determine what type of formative assessment strategy to use?

Deciding on what type of formative assessment strategy to use will depend on a number of factors. Teachers need to determine what aspect of student learning they want to measure. They then need to consider the learning preferences of their students. Formative assessment strategies can be given to students individually, as partners, in small groups, or as a class. The type of grouping used for the formative assessment will also influence the choice of strategy. Teachers should not rely on one type of assessment strategy. A variety of individual and group formative assessment strategies should be used. Individual strategies allow teachers to get a clear picture of each student and their understanding of the concept or skill being measured. Group strategies provide teachers with general information about student learning that can be used to plan instruction. Students can also use formative assessment information to make changes to their learning.

How can teachers use the assessment information?

Teachers use formative assessment information to assess how their current instructional strategies are working with their students. If there are students who are struggling, teachers may need to work individually with a student, present information other ways, or adapt their current instructional strategy. Students who have appeared to master the outcome or goal being formatively assessed, may need to be further assessed or have learning opportunities planned that challenge them and are designed at their level of understanding. Teachers are also able to identify misunderstandings students may have and adapt their instruction accordingly.

How can students use the assessment information?

Students can use formative assessment information to determine what they need to do to achieve the goals or outcomes of the unit. Students may need to adapt or to change their learning to master curriculum outcomes. If students are not achieving at an expected rate, they can look at the strategies they are using for learning and decide whether they need to change their current learning strategies or adopt new ways of learning. The information provided by formative assessment strategies can also be used to help students reflect on current learning goals or set new goals.

FORMATIVE ASSESSMENT STRATEGIES FOR TEACHERS

1: **ABC Brainstorming** - Using the ABC brainstorming strategy with students midway through a unit provides you with information about what students have learned about a particular topic. Working individually, in pairs, in small groups, or as a class, students brainstorm words or phrases that begin with each letter of the alphabet and are related to the current unit of study. Midway through a unit on fire safety, students may write "meeting place" next to the "M" and "stop, drop, and roll" next to the letter "S." A glance through the brainstormed lists helps you determine what information is lacking and provides direction for planning opportunities that focus on these gaps in your students' learning. A graphic organizer that can be used with the ABC brainstorming assessment strategy is available at:

http://www.studenthandouts.com/3web/abcbrainstorming.pdf

- 2: Analogies A useful formative assessment strategy is to ask students to create an analogy between something they are familiar with and the new information they have learned. When asked to create an analogy for an atom, students may come up with an atom being like a community. The nucleus of the atom is like your immediate family. The electrons that fly around the nucleus are like members of the community that you may or may not interact with on a regular basis. Asking students to explain their analogies will show the depth of their understanding about a topic.
- 3: Checklists Class checklists are a great tool for collecting data about students during a unit of study. Before beginning a new unit, make a list of all the skills students will need to demonstrate mastery of the unit's outcome(s). On a chart, list the students names down the left hand side and the skills across the top. Clip the chart to a clipboard and position it in an easily accessible place. As students are participating in various learning opportunities, observe the students and check off the skills you see students demonstrating with proficiency. Here is an example of a class checklist for speaking skills:

	topic is clear	ideas are organized logically	varies pace of speaking and tone of voice	strong opening	connects with audience
Student A					
Student B					
Student C					
Etc.					

Individual checklists can also be used to gather data about student learning. Students and/or teachers complete the checklists. A checklist for writing provides students and teachers with assessment information. Students use the checklist to analyze their piece of writing and determine if they need to make any changes before handing in a copy to you. You use the checklist to identify areas that the student needs more instruction or practice. A sample writing checklist may look as follows:

Name:		
	Student	Teacher
contains complete thoughts		
well organized		
spelling is correct		
uses correct punctuation		
Etc.		

In the above example, students check off each area they completed in their writing. They attach the checklist to their writing when they hand it in to you. You use the checklist as you read and assess their written work. If there are discrepancies, provide feedback to the student by meeting with them individually and discussing ways to make their writing stronger or by providing written suggestions at the bottom of the checklist.

A number of different checklists are included on the Alaska Department of Education & Early Development website. Scroll down the Index to Assessment Strategies and Samples to view different examples of checklists. The index can be found at: http://www.eed.state.ak.us/tls/frameworks/mathsci/ms5_2as1.htm

- 4: **Choral Response** If you need a quick assessment of student understanding, ask students to respond to a series of questions "as a class." If you listen carefully to the number and content of responses, you will get a good idea of whether or not the students are clear on what you are presenting. Choral response encourages all students to be actively engaged in the assessment process.
- 5: Cloze Procedure The cloze procedure can be used to determine the level of student understanding regarding a particular topic or unit of study. Create or use a passage that relates to the unit. Make sure the passage is at a readability level for your students. Two or three passages at different readability levels may be needed to accommodate all the students in your class. Decide whether you are going to eliminate key vocabulary words or whether you will eliminate a set word, such as every 7th word. Your decision will be based on the age and readiness levels of

the students in your class. Be sure to leave the first and last sentences intact to assist with student understanding. Two sites available online for creating cloze passages are:

http://www.lextutor.ca/cloze/, and http://edhelper.com/cloze.htm

Saskatchewan Public Schools has suggestions for using and adapting the cloze procedure to meet the needs of your students. The information is located at: http://olc.spsd.sk.ca/DE/PD/instr/strats/cloze/index.html

6: **Concept Maps** - Concept maps are a type of web that provides a visual representation of student understanding about a particular topic being studied. Google "concept maps graphic organizers" for a variety of printable concept maps that your students can use. Students print the topic or main idea in the oval in the center of the page. They then write supporting details in the spaces surrounding the center oval. Depending on the age and ability of the students, they can also group similar supporting details together. Using concept maps is a skill that must be taught to students. Once students are familiar with concept maps, they can be used as a formative assessment strategy in any subject area.

Visit the All About Adolescent Literacy and the eHow websites for more information on concept maps and to download graphic organizers to use with your students. The All About Adolescent Literacy website can be found at:

http://www.adlit.org/strategies/19769/

Visit eHow at:

http://www.ehow.com/how_6537971_use-assessment-tool-elementary-school.html

- 7: **Conferences** Student understanding can be formatively assessed using one-on-one conferences with each student in your class or with select students for whom you want to further assess their learning. Determine your target questions ahead of time to ensure you are gathering information related to your goal or outcome. Take notes during the conferences to refer to later when planning instruction.
- 8: **Computer Surveys** Computer surveys are a quick way to determine what your students have learned about a topic of study. Create ten short response questions true/false, multiple choice, or one word completion questions, and use a platform like SurveyMonkey to create the assessment. SurveyMonkey allows you to see individual responses as well as providing a summary of class responses. SurveyMonkey is located at:

http://www.surveymonkey.com

9: **Demonstration Stations** - The use of demonstration stations is a great way for students to show what they know and help you determine the direction of future instruction. Midway through a unit on magnets, set up a number of stations and have students demonstrate how magnets attract and repel, where the magnetic field is the strongest, the parts of a magnet, how magnets are attracted to some objects and not others, how a compass works, etc. At each station, the students could also explain their thought processes to you or write their thoughts in a science journal.

- 10: **Discussions** Having a class discussion part way through a unit of study can provide you with valuable information regarding what your students know about the subject. Focus the discussions on higher level thinking skills and give students a few minutes to reflect on their learning before beginning the discussion. Encourage students to share what they have learned and how that knowledge may have an impact on their daily lives. Brainstorm ways that the knowledge could be transferred to other subject areas or situations the students may come across. Listening carefully to the responses given by students will provide useful information for planning future instruction.
- 11: **Double Entry Journals** Journals are a great way to formatively assess students and get a "window" into their thinking. Double entry journals are one form of journaling. A double entry journal has two columns. In the left column, students write key words, ideas, or quotations. They then give their personal response to these words in the right column. Students may include questions that arise out of their responding. By reading the students' responses, you can assess students' knowledge and understanding of the topic you are studying. For example, when studying flight provide students with the phrases "lift vs. gravity," "Wright brothers," and "laws of flight." Students print these phrases in the left hand column of their journal and then respond to them in the right hand column. Reading over the student responses will provide you with information about student understanding. A website that contains more information on double entry journals, as well as some examples, is:

http://homepage.usask.ca/~dul381/common/dej.html

A template for a double entry journal is available at TeacherVision: http://www.teachervision.fen.com/graphic-organizers/printable/48390.html

12: **Drawings** - Some of your students may be able to show you what they know by creating a drawing or a series of drawings to demonstrate their understanding. Encourage students to share their thinking about what they are drawing to gain insight into what they have learned up to a given point in a unit of study.

An article entitled, "Annotated Student Drawings" describes one way to use student drawings to formatively assess student understanding. It is available at: http://formativeassessment.barrow.wikispaces.net/Annotated+Student+Drawings

- 13: **Email Questions** Technology is a great resource for teachers and a medium that most students are familiar with and comfortable using. If your school provides all its students with email addresses, send questions to your students. The questions should focus on higher level thinking skills and demonstrate their learning during a current unit of study. Encourage students to think about all the learning opportunities they have participated in and how those activities fit in with their own background knowledge and experiences.
- 14:**Examples/Non-Examples** Encourage your students to provide you with examples and non-examples of a topic being studied. The examples and non-examples provide you with information regarding the depth of understanding of your students. For example, during a unit on

recycling, ask your students to provide you with examples of recycling and examples that do not involve recycling. While studying a unit on mixtures and solutions in science, review mixtures and determine student understanding by asking students to provide you with examples and non-examples of mixtures. Ask students to explain their reasoning for classifying each example and non-example.

15: Exit Cards - Exit cards could be used on a regular basis to formatively assess what your students know, understand, and have learned during a current unit of study. Before students leave at the end of class, ask them a question or pose a problem for them to solve. Give students a problem involving interest to solve during a unit in math or ask students to draw and label the planets when studying the solar system in science class. Ask students why people leave their homeland in social studies and how they would feel if they had to relocate with their family to another country. Students record their responses on a scrap piece of paper, a file card, or a sticky note. Collect the exit cards as the students leave the classroom. Glance through the exit cards to determine if students are generally understanding the topic or whether you need to provide further whole class or small group instruction in a particular area. Separate the exit cards into piles, indicating students who have mastered the outcome or are well on their way to doing so, students who are making steady progress, and students who need additional one-on-one or small group instruction. Exit cards can be used to create groupings for the next day's lesson and activities can be planned based on the students' responses.

Visit Educational Aspirations for more information on using exit cards for formative assessment:

http://educationalaspirations.wordpress.com/2012/02/18/exit-cards-and-formative-assessments/

16: **Fist of Five** - When you need a quick, immediate assessment, the fist of five is a great strategy. Ask your students a question and have them respond by showing you their level of understanding. Students hold up one finger if they are still unsure of a topic and need to be provided with more information. If they are on their way to fully understanding, they might hold up three or four fingers. Students who have mastered the unit and are able to demonstrate their knowledge and understanding would hold up five fingers. A glance around the classroom provides you with information about student learning and allows you to adapt your instruction accordingly.

Check out Cheryl's Classroom Tips to find out how one teacher uses the fist of five with her students:

http://www.cherylsclassroomtips.com/2010/08/formative-assessment-fist-to-five.html

17: **Four Corners** - A great way to get students out of their desks and moving is the four corners strategy. Some students learn better when they are moving so this strategy appeals to their learning preference. In each corner of the room, provide a label. Label one corner, "Strongly Agree," one corner, "Agree," the third corner, "Disagree," and the final corner, "Strongly Disagree." Call out a fact or statement about the current unit of study. Students go and stand in the corner that matches their response. Encourage students to share their reasons for choosing the response. Have one or two students from each corner share their answers with the rest of the

class. By listening to the students as they discuss their reasons and share them with the class, you are provided with information that can guide future lessons.

The West Virginia Department of Education website provides more information about the four corners strategy and links to other useful websites. It can be found at: http://wvde.state.wv.us/teach21/FourCorners.html

18: **Graffiti Wall** - The graffiti wall is fun activity for students and gives you a visual representation of what your students have learned during a unit of study. Cover a part of a wall with white paper. Encourage students to write or draw what they have learned about a topic. Students can jot down facts, write personal opinions, connect their learning to other areas of study, etc. Using the graffiti wall activity partway through a unit provides you with information for further planning of instruction. If there appear to be gaps in your students' learning, you can target those areas and further assess to see if there is indeed a deficit that you need to focus on in future lessons. Students may have made connections that you were not expecting or hadn't even thought of when planning the unit. The information you collect from the graffiti wall is valuable formative assessment data. Leave the graffiti wall up during the remainder of the unit and students can continue to add comments and drawings. For more information about using a graffiti wall as an assessment strategy please visit:

http://www.wccsonline.com/cchs/departments/fine_arts/CCHS%20Photography/ AplusTeachingStrategies/graffitiwall.pdf, and http://www.gips.org/assets/files/Learning/CheckingForUnderstanding/Gallery.pdf

- 19: **Graphic Organizers** Graphic organizers have many uses in a differentiated classroom. Using graphic organizers to formatively assess students is one use. Graphic organizers provide a visual representation of student learning. Students complete the template with their thoughts and understandings about a unit of study. A search on Google will provide you with many examples and templates to use. If you want to assess your students on sequencing, Google "sequencing graphic organizers." For graphic organizers related to science, Google "science graphic organizers." There are a multitude of graphic organizers for every grade level available online. Two websites that you may want to check out are Education Oasis which is available at: http://www.educationoasis.com/curriculum/graphic_organizers.htm and Education Place at: http://www.eduplace.com/graphicorganizer/index.jsp
- 20: **Individual Whiteboards** Individual whiteboards provide you with a quick assessment of student learning. Ask students questions about a topic or unit of study. Students record their answers on individual whiteboards. Circulate throughout the class and observe students responding. Students can also be asked to hold up their whiteboards. A glance at the whiteboards will provide you with information regarding student knowledge and understanding. Students can also be asked to draw and label their diagrams. In a unit on plants, ask students to draw and label the parts of the plant or the photosynthesis cycle. In a biology class, ask students to draw and label the heart and the route blood takes as it passes through the heart.

21: **Inside-Outside Circle** - The inside-outside circle is a strategy that can provide you with information about student learning. Divide your students into two groups. One group is the inside circle and the other group forms the outside circle. Students pair up with other students in the opposing circle and face one another. The inside circle begins by responding to a question or statement provided by the teacher. After a set amount of time--perhaps a minute or two, students reverse roles and the outside partners respond. While students are responding, circulate around the circles and listen to comments and explanations being shared. This information will help guide further planning.

The West Virginia Department of Education website provides further information on the inside-outside circle strategy and its use as a formative assessment strategy. http://wvde.state.wv.us/strategybank/Inside-OutsideCircle.html

22: **Learning Logs** - Learning logs are notes students make during a unit of study. Time is set aside at the beginning or end of class for students to write about what they have learned, list any questions about the topic they may have, or make connections between the topic and their own lives. Learning logs provide you with valuable information about what students are learning and possible directions for future instruction. Using learning logs as a formative assessment strategy provides you with information about student learning and what information or skills students may still need to reach the goals and outcomes of the unit. More information on learning logs is available at the Saskatoon Public website:

http://olc.spsd.sk.ca/DE/PD/instr/strats/logs/

- 23: **List 10 Things** About midway through a unit of study, instruct students to list ten things they have learned during the unit. Gather these lists and read through them to get an idea of where students are in regard to understanding. Look for gaps in learning or misunderstandings. These gaps and misunderstandings can be addressed in future lessons.
- 24: **Matching Activities** A fun way to assess student knowledge of vocabulary or facts is to match words with their definitions or group facts into given categories. Provide each student or pair of students with a set of cards. If assessing knowledge of content area vocabulary in a health unit on nutrition, print words such as "carbohydrate," "protein," and "calorie" on one set of cards and their corresponding definitions on another set of cards. Be sure that there is only one word or one definition on each card. Students can also play a game of concentration with these cards. All cards are turned over so that the words and definitions are hidden. Students play this game with a partner. One student turns over two cards. If the two cards contain a word and a definition that match, they keep the pair of cards. Cards that do not match are turned back over and the other student takes a turn at finding a match. The activity continues until all words and definitions have been found.

Another way to use the matching activity is to put individual words onto each card and then have the students group the cards. When studying renewable and non-renewable resources, you would print words like "oil," "oxygen," "water," "coal," and "uranium" on the cards. Give each student or pair of students a set of cards. Students divide the cards into two piles. One pile would include renewable resources and the other pile would include non-renewable resources.

- 25: **Observations** Observing students can provide valuable information about how students are progressing and what strategies they are using to learn. Recording information can take several different forms. You can use sticky notes to jot down your observations. At the end of the day, these sticky notes can be easily filed into individual student file folders or binders. Using a grid that contains all the names of the students in your class is another useful collection device. As you observe different students, you jot down information in their box on the grid. The grid allows you to see, at a glance, the names of the students who have not been observed. These students can then become the focus of your observation during the next class. File cards are another collection device. Notes about individual students can be collected on file cards. At the end of class, file these cards behind each student's name. When you are ready to analyze your observations, simply pull out all the file cards on a particular student and read the comments you have made during your observations. If observations are taken over a number of classes, you can determine whether there is a pattern to the behaviours you observe.
- 26: One Minute Essays The one minute essay is a quick formative assessment strategy that allows you to gauge student understanding of a particular topic. Pose a question to the students have the students respond. Tell the students they have one minute to write down their response. Ensure the question you ask can be answered in one minute. Use questions that cause students to reflect on learning and make personal connections with their own lives. Use Bloom's Taxonomy of question starters if you are unsure of how to pose a question. Aim for questions that use the three higher levels. Question starters are available at:

http://www.teachers.ash.org.au/researchskills/dalton.htm

27: One Minute Fluency - Being able to read fluently is an important skill. Assess the fluency of your students on a regular basis to ensure they are reading at an appropriate rate for understanding at their grade level.

For more information on reading fluency and a list of reading rates per grade level for both oral and silent reading, please visit:

http://www.readinghorizons.com/blog/post/2010/07/19/Optimal-Silent-and-Oral-Reading-Rates.aspx

For reading passages at your grade level visit the Meade School District for Grade 2 to Grade 12 passages:

http://www.meade.k12.sd.us/search.html?q=fluency%20passages

and The McGraw-Hills Company website for Grade 1 to Grade 6 fluency passages: http://treasures.macmillanmh.com/california/teachers/building-reading-and-writing-skills/ student-fluency-passages

28: One Sentence Summaries - Asking students to provide you with a one sentence summary of what they have learned provides you with information about what your students know about a topic. Give students time to reflect on their learning and encourage students to think about their response. The depth of the student summaries will indicate their understanding of the topic or unit to date and provide you with direction for future planning of lessons.

29: **Open-Ended Questions** - Using open-ended questions allows you to determine the depth and breadth of student learning. Ask students questions that cannot be answered with "yes" or "no" or another one word answer. Open-ended questions require students to think about their answers and use their knowledge and understanding about a topic in their responses. Questions that involve the word "why" often encourage deeper thinking. Examples of using open-ended questions in math are available at:

http://books.heinemann.com/math/nature.cfm

A good article entitled, "Open-Ended Questions in Reading" is on the Practical Assessment, Research & Evaluation website:

http://pareonline.net/getvn.asp?v=3&n=4

30: **Paper Pass** - Paper pass is a form of brainstorming that gets students up and moving from their desks. Chart paper with different target words or questions are posted around the classroom. Students rotate around the room to the different brainstorming sheets and add their comments about the topics and about what other students have written. The process for the paper pass can be informal or formal. An informal use of the paper pass permits students to wander around the classroom and respond to the topic words or questions of their choosing. A more formal use involves students being divided into groups and systematically rotating around the room and responding. A wiki that outlines the specific steps for using the paper pass technique can be found at:

http://differentiatedinstruction.pottsgrove.wikispaces.net/Paper+Pass

31: **Peer-Assessments** - Assessments by peers is a powerful way to gather information about students and their understanding. Students can use a set criteria to assess the work of their classmates. Peer-assessment can be used in different subject areas. In writing, for example, students can assess another student's piece of writing and provide feedback about what they observe. An example of a peer assessment for writing is:

http://www.nclrc.org/portfolio/formWritingRubricPeer.html

Another example is available at:

http://go.hrw.com/resources/go_ss/teacher99/toolkit/TOOLKT18.pdf

Whenever students work in groups, the conditions exist for students to assess their peers. Examples of peer-assessments for group work are available at:

http://www.pbs.org/now/classroom/peer2.pdf, and

http://www.uky.edu/SocialWork/crp/files/Samplepeerevaluationform.pdf

32: **Placemats** - The placemat strategy is an enjoyable activity for students and provides you with information about their current level of understanding. Provide each group of four or five students with a large sheet of paper. In the middle of the paper write the topic or target question. Students divide the paper up so they each have a section to write in and there is room in the middle to summarize their responses. Students individually write or draw to demonstrate their understanding of the topic or target question in their area of the placemat. They then share what they have written or drawn with the other group members. After everyone has finished sharing, students discuss the information and come up with two or three main ideas. They write these

ideas in the center of the paper and share them with the rest of the class. An analysis of the placemats provides you with a glimpse of what the students have learned so far in the unit.

33: **Problem Solving** - Pose a problem to students and ask them how they would solve it. Students can respond orally or in writing. The responses given by the students indicate their level of understanding regarding the unit being studied. Information provided by the students gives you an indication of what type of instruction is needed during future lessons. An article that explains more about the use of problem solving as a formative assessment strategy appears on the Teaching Math website:

http://www.learner.org/courses/teachingmath/gradesk 2/session 03/section 03 d.html

- 34: **Questionnaires** Questionnaires can be used in various subject areas and for a variety of purposes. When used as a formative assessment strategy, questionnaires provide teachers with information on student learning that they can use to plan further instruction.
- 35: **Questioning** Questioning is a great formative assessment strategy to determine the depth of student understanding. Ask students lower level questions that focus on the facts and general information about a topic. Use higher level questions to encourage students to think about and reflect on their learning. During a unit on energy conservation, you may ask students to tell you different ways that they could conserve energy. The listing of ideas would be a lower level question. Asking students to describe one way they conserve energy and how this practice affects the environment would be a higher level question. Bloom's Taxonomy contains six levels of thinking that teachers can use to guide the questions they ask their students. Question starters for the different levels of Bloom's Taxonomy can be found at Uteach. Visit Uteach at:

http://u-teach.blogspot.ca/2007/08/question-starters.html

Two other websites that contain information focused on asking good questions are:

http://www.edb.utexas.edu/minliu/pbl/TIPS/question.html#, and

http://www.redorbit.com/news/education/258931/

inviting student engagement with questioning/

36: **Quick Writes** - Quick writes give teachers a visual of student learning. Provide students with an open-ended question and set an amount of time for having them write--from two to five minutes. Tell students not to worry about the conventions of writing but rather focus on getting their ideas down on paper. When the time is up, ask students to put their pencils down. Look through the quick writes for valuable information regarding the knowledge and understanding your students have about a given topic. Using a quick write at the start of class is also a great way to activate the prior knowledge of your students.

A good article on the use of quick writes as a formative assessment tool is at the MaryGrove College website:

http://info.marygrove.edu/MATblog/bid/70537/Quickwrites-are-a-Great-Instruction-and-Assessment-Tool

37: **Reflection Journals** - Reflection journals are a type of journal that encourages students to think about what they have learned and make connections to their own lives. Reading through the entries that students create gives you information that can be used to plan future lessons. Visit TeacherVision for examples of reflection journals:

http://www.teachervision.fen.com/writing/letters-and-journals/48544.html

- 38: **Repeat Preassessments** Another way to formatively assess your students is to repeat a preassessment strategy you used at the beginning of a unit of study. At the start of a unit on ecosystems, you may have asked your students to create a web or write a one-minute essay on ecosystems. Midway through the unit, repeat the strategy you used to collect preassessment data. Read through the student responses and compare the depth of understanding to the initial assessment. Most preassessment strategies can be repeated to determine what students have learned and to inform your instruction.
- 39: **Response Cards** There are so many uses for response cards in a classroom. Ask a question and students respond by holding up a card. The most common response cards are yes/no questions. Students are provided with two cards. One card has the word "Yes" written on it and one card has the word "No" on it. After calling out a question, students respond by holding up their answer. Glance around the room and quickly assess student understanding. There are many different types of response cards. Try using true/false response cards, math operations cards, or punctuation cards with your students.

Deb's Data Digest gives an example of using math facts response cards and has a link to using punctuation response cards. Check out these examples at: http://datadeb.wordpress.com/2010/01/15/rapid-response-cards-math-operations/

- 40: **Self-Assessments** Provide each student with a self-assessment related to your unit of study. Self-assessment involves students reflecting about their own learning in relation to unit goals or outcomes. Checklists or open-ended questions can be used to assist students with their reflections. Include questions that deal with student understanding about the topic and with the identification of areas that need more information or more practice. Students are often able to articulate their learning needs to us. We just need to ask the right questions. Self-assessments is one way of asking students about their learning and the information can then be used to help plan future instruction.
- 41: **Sentence Prompts** Sentence prompts can be used in a variety of ways to informally assess students and gather information to inform instruction. Simple sentence starters such as the following could be used:
 - I understand
 - I don't understand
 - I need more information about ...

Prompts for finding out what students have learned about different writing conventions are included in the article, "Formative assessments: Informal writing beats grammar quizzes" which is available at the You Can Teach Writing website:

http://www.you-can-teach-writing.com/formative-assessments.html

Prompts that can be used in math are available at:

http://futureofmath.misterteacher.com/Writing%20Prompts.pdf

The wording of these prompts can be adapted to target the unit outcome or specific skill you want to formatively assess.

- 42: **Show of Hands** A simple strategy to gauge the understanding level of your students is through a show of hands. In a unit on problem solving, you may ask your students if they recall the steps needed to solve a problem or how to determine the operation of a problem. Through a quick show of hands you can decide whether you need to review with a few students or with the whole class.
- 43: Student Composed Questions Have students write "test" questions. Students compose the questions and possible answers. Students should think about what questions would show an indepth understanding of a topic. When students have finished creating their questions and answers, they hand them in to you. Read through the questions and answers to get a feel for what the students have learned about a topic. Use the questions as prompts for class discussions or have students exchange their question sheets. Students answer the questions and return them to their owners to be "marked." Students enjoy playing the role of the teacher. Encourage students to provide positive, descriptive feedback to the student who answered their questions.
- 44: **Teach a Friend** A good strategy for determining if students understand a concept or process is to have them teach it to a friend. Students need to think about the knowledge and skills needed for understanding and include that information in their teaching. Pair students up and have them "teach" their partner about the concept or process.
- 45: **Think-Pair-Share** The think-pair-share strategy is a great way to gather information about the level of understanding of your students. It is a quick and easy strategy that can be used a number of times throughout a unit of study. Ask students questions such as, "What did you learn during today's lesson?" or "What connections can you make to your own life based on what you have learned so far?" Give students a few minutes to think about these questions. Pair students up with partners. Students share their thoughts with each other and then join a larger group or the whole class. Randomly call on students to share their ideas. By going through this process, students are able to solidify and refine their thinking before having to share their answers. Circulate throughout the class as students are sharing their thoughts and ideas to assess the overall depth of understanding.

A good article that looks at the think-pair-share as a formative assessment strategy is, "Teaching Ideas: Using Think-Pair-Share as a Formative Assessment in the Classroom" by Vivian Herron. This article can be found at:

http://voices.yahoo.com/teaching-ideas-using-think-pair-share-as-formative-3880322.html?cat=4

46: **Three Facts and a Fib** - The three facts and a fib activity is a great strategy to find out what students have learned about a unit of study. Students write down three facts and one fib about a

topic. They take turn sharing their three facts and a fib with a partner, in a small group, or with the entire class. Students enjoy trying to identify the "fib." Circulate throughout the class as the students are writing and sharing what they have written.

47: **Three Minute Pause** - The three minute pause is a strategy that allows students to stop and reflect on learning, make connections to personal experiences, and ask for further information or clarification. Assign students to groups. Give students three minutes to complete this activity. First, the students summarize the main points of the new learning. Next, they make connections to personal experiences. Finally, they ask questions to further their understanding of the learning.

Visit the Literacy Geeks website for more information about the three minute pause: https://sites.google.com/site/literacygeeks/reading-strategies/3-minute-pause
For other uses and variations of the three minute pause, read the article by Doug Buehl at: http://www.weac.org/news_and_publications/education_news/1996-1997/read_three.aspx

- 48: **Three Things** The three things strategy involves giving each student a piece of paper and having them visually represent, through words or drawings, three things they have learned in the unit so far. Tell students to provide as many details as possible to determine the depth of their understanding. Have students share with a partner. By talking through their ideas, students may come up with more details to add. Give students a couple minutes to add or make changes to their "three things" and then have them hand them in so you can take a closer look at what they created. Circulate through the classroom as students are working and listen to what they are saying to their partners. Use this information to help plan future instruction.
- 49: **3-2-1** The 3-2-1 strategy is a quick way to gain information about all the students in your class and the level of understanding they have about a current unit of study. Ask students to jot down three things they have learned about a topic, make two personal connections to the topic, and one area that is unclear or one question they have about the topic.

Reading Quest provides a few suggestions for using the 3-2-1 strategy and a template you can print out for classroom use. View the suggestions at: http://www.readingquest.org/strat/321.html

Stem Resources also provides a description of the 3-2-1 strategy at: http://www.stemresources.com/static/tools/Assessments/Formative/3-2-1Reflection/index.html

50: **Thumbs Up, Thumbs Down** - Using the thumbs up/thumbs down strategy with your students is one way to determine whether students understand the information presented. After introducing students to new learning, do a quick comprehension check to see if students understand the information presented. Ask students to give you a thumbs up if they understand and a thumbs down if they don't understand and need more information.

An article entitled, "Formative Assessment: Thumbs Up, Thumbs Down, Thumbs All-Around" is available on the Teaching Through the Arts Blog. In this article, the author, Jeffrey Billard, discusses how students can use their thumbs to show different degrees of understanding. View this blog at:

http://teachingthroughthearts.blogspot.ca/2011/07/formative-assessment-thumbs-up-thumbs.html

51: **Traffic Light** - Provide students with three circles. Give students a red circle, a yellow circle, and a green circle. To check for student understanding during a lesson or unit, ask students questions about their learning. If students are comfortable with the topic and ready to move on, they hold up their green circle. If they are fairly comfortable with the topic, they hold up their yellow circles. Students who are confused or require further instruction to understand, hold up the red circle. This is a quick strategy that provides you with immediate feedback and provides direction for your instruction.

Innovate My School has an interesting article that suggests an alternative to the three circles. The article, "Traffic light cups to enhance assessment for learning - ten top tips" describes how students can use coloured cups to indicate their level of understanding. This article is available at:

http://www.innovatemyschool.com/blog/itemlist/tag/traffic%20light%20cups.html

52: **Turn and Talk** - The turn and talk strategy allows all students to talk about a question or topic that you have introduced in class. Students turn to a neighbour and discuss their thoughts and what they have learned about the question or topic. Both students are given the opportunity to speak. Circulate throughout the classroom during the turn and talk activity in order to get an idea of what they students know and have learned about the question or topic being studied.

The Mid-Pacific Institute blog post entitled, "Turn and Talk Strategy Gives Children A Voice" provides detailed information about the turn and talk strategy at: http://www.midpac.edu/elementary/1 2R/2012/01/the-turn-and-ta.php

53: **Whip Around** - Whip around is a formative assessment strategy that involves all the students in the class. First, you pose a question to the students. The students are given a few minutes to formulate their answers and make brief notes. You then repeat the question and "whip around" the room and have each student give one response from their notes. The whip around assessment strategy provides general information about student learning and can help you plan future instruction. More information about the whip around strategy is provided at the Daniell Middle School Website:

http://daniellmiddle.typepad.com/dms_school_improvement_st/2008/09/whip-around-str.html

FORMATIVE ASSESSMENT STRATEGIES FOR STUDENT USE

54: **Ask** - Ask your students what they have learned during a unit. Have students identify what skills they need to practice or what information they require to help with their understanding of the topic. Students are often aware of the type of assistance they need. There are a number of ways to collect this information. Pose the question to the entire class and have them jot down their responses and hand them in. Meet with students one-on-one and have a conversation that focuses on the current unit of study and ask students what they need to help them continue to learn about the topic. Students can identify what they need to do to further their understanding and what you can do as a teacher.

- 55: **Checklists** Checklists provide students with valuable information and indicate areas they need to focus their learning on. Provide checklists for tasks and assignments that are given to students so they have a means to assess whether they have completed all the steps in a task or included all the needed information in an assignment. If students are missing information, they can decide on what course of action they need to take to learn the information.
- 56: **Journals** Journals provide useful information to both teachers and students. Encourage students to identify questions or needs they have about their learning and reflect on how they could take an active role in addressing these questions or needs. Respond to student questions with further suggestions and let students decide on the best course of action.
- 57: **Process Exemplars** Process exemplars provide students with information about the thinking process that leads to understanding. Collect samples of student thinking by having students explain how they arrived at an answer. A good example of a process exemplar would be solving a two digit multiplication question in math. Students record each step in their thinking and provide descriptions of how they solved the question. By providing a number of different process exemplars for each question, students realize there is more than one way to solve a problem and they can try out different processes and find the one that works the best for them.
- 58: **Product Exemplars**: Provide exemplars for students to compare their work. When writing a narrative paragraph, for example, post a few examples of the type of paragraph you are wanting them to hand in. Students can compare their narrative paragraphs to the exemplars and determine what they need to change or add to their paragraph to demonstrate mastery of narrative writing at their grade level.
- 59: **Self-Marking Quizzes** Create a number of quizzes that contain higher and lower level questions. Allow students to take these quizzes and use a key to mark the quizzes themselves. Students are able to determine their level of understanding regarding a particular topic or unit of study. They can also identify areas they need to spend more time learning by taking these self-marking quizzes. It is important to stress to students that the purpose of these quizzes is to identify areas for further development and that the number of correct or incorrect responses is not important.
- 60: **Writing Continuum** Writing continuums provide valuable information to students which they can use to make decisions about their learning. Provide students with a number of different samples of writing that are written at different developmental levels. Students compare their writing sample to the samples on the continuum to determine what level they are working at and what they need to do to move to the next level. By analyzing their writing, students are able to identify areas they need to develop and set goals to improve their writing. Collect writing samples from your students to create your writing continuum. An example of criteria to look for in your writing samples is provided at:

http://www.bertschi.org/downloads/Writing Continuum table.pdf

Continuums can also be created and used in other subject areas. Use work samples from your students in creating your continuums. An example of a math continuum is found at: http://www.bertschi.org/downloads/Math Continuum.pdf

Other booklets available in the Focus on Student Learning series are:

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