Phases of the Moon

Title of Lesson: Animated Graphics Are Out of This World	
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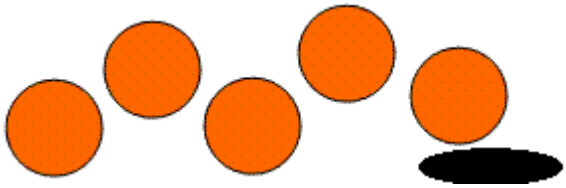
Subject Area(s): Science, Technology Grade Level(s)/Course:5th This lesson uses technology to complement a science lesson over the phases of the moon. It is expected that students have been taught these phases prior to this lesson.	
State Standards (Texas: TEKS)	**Science TEKS** 5.6(A) identify events and describe changes that occur on a regular basis such as in daily, weekly, lunar, and seasonal cycles; **Technology TEKS** 1(B) save and delete files, uses menu options and commands, and work with more than one software application; 1(E) access remote equipment on a network such as a printer or other peripherals. 2(A) use a variety of input devices such as mouse, keyboard, disk drive, modem, voice/sound recorder, scanner, digital video, CD-ROM, or touch screen; 2(D) produce documents at the keyboard, proofread, and correct errors; 3(A) follow acceptable use policies when using computers; and 3(B) model respect of intellectual property by not illegally copying software or another individual's electronic work. 7(A) use software programs with audio, video, and graphics to enhance learning experiences; 7(B) use appropriate software to express ideas and solve problems including the use of word processing, graphics, databases, spreadsheets, simulations, and multimedia; and (C) use a variety of data types including text, graphics, digital audio, and video. 10(A) use font attributes, color, white space, and graphics to ensure that products are appropriate for the defined audience; (B) use font attributes, color, white space, and graphics to ensure that products are appropriate for the communication media including multimedia screen displays, Internet documents, and printed materials 11(A) publish information in a variety of media including, but not limited to, printed copy, monitor display, Internet documents, and video 12(B) evaluate the product for relevance to the assignment or task
Stated Objective(s)	TSW create an animated digital graphic TSW use graphics software to produce a product

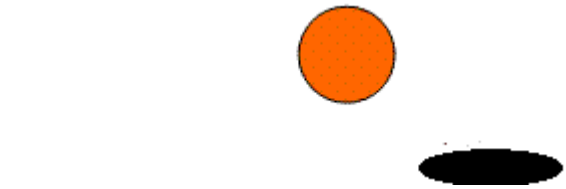
	TSW apply knowledge of the lunar cycle to develop graphic TSW work with multiple software programs
Anticipatory Set (Focus)	Using a computer and projections screen show the students a variety of interesting animated graphics. Sample location to access graphics can be found at: *http://all-ez.com/critters.htm* *http://www.internoodle.com/kermit/Frog/Main.asp?Mode=1* *http://www.animation-station.com/* Ask students to infer how these graphics are created
Explanation	Show students an example of a flip book with a "moving cartoon." Quickly flip through the book and let student observe how the cartoon appears to move. Explain that animated graphics are created in much the same way with many pictures and slight changes in each one that are connected together in a series of rapid movements.
Modeling	Show students an example of a simple animated graphic. For instance, using a paint program create two graphics; a solid black rectangle , and a solid black rectangle with your name in a bright color centered in the rectangle. Demonstrate how to add these two images using GIF animation software such as **GIF** *Construction Set for Windows***.** Set eh animation to loop continuously. Let the students preview the blinking name animation, and demonstrate how to adjust the speed of the animation.
	Check for Understanding: Using a paint program have student create the same two graphics that you just demonstrated using their own name and choice of colors.
Guided Practice	Together as a group guide the students through the process for adding images using the GIF animation software. Give students time to manipulate the software and make adjustments to their graphics.
	Check for Understanding: Do a visual check of each students monitor and check for understanding of the process.
Opportunities to Relearn	Show students another example of a simple animated graphic. For instance, using a paint program, create an animated digital graphic that depicts a ball bouncing into a hole. See attached graphics. Demonstrate how to use the student template to "erase" parts of the graphic that are not needed. Students will create replicas of pictures 1-6 using a template provided for each student on their computer. Instruct them to name each graphic as pic1, pic2, pic3, etc. and save to the computer. Once again demonstrate how to add these six images using GIF animation software such as *GIF Construction Set for Windows***.** Have students repeat the same process using their own saved graphics. Give students time to manipulate the software and make adjustments to their graphics
Independent Practice	Instruct students that they can now demonstrate their understanding of creating animated graphics and the phases of the lunar cycle by creating an animated graphic that correctly displays the correct order of the phases in the lunar cycle. Provide each student digital copies of the template graphics which depicts a full moon. (See attached) Be sure that student first create a sketch of each graphic and how it should appear. Students will use a paint program to create the 7 additional moon phases from the template provided. Each individual picture should be saved in the following format:pic1student last name, pic2studentlastname, etc. Also provide each student a copy of the rubric that will be used to assess their final product.
Assessment or Evaluation	Assess student understanding using the attached evaluation rubric.

Closure	Using a projector, show each student's final product. Discuss other uses for animated graphics and encourage students to continue to develop these types of products at home. Provide URL's for home use such as Web Monkey for kids and the download link *for GIF Construction Set for Windows*
Materials	**Technology Resources:** *URLs, Software, # of Computers, Printers, etc…* *http://www.webmonkey.com/webmonkey/kids/lessons/animation.html/* *http://all-ez.com/critters.htm* *http://www.internoodle.com/kermit/Frog/Main.asp?Mode=1* *http://www.animation-station.com/* **Software:** GIF Construction Set for Windows http://graphicssoft.about.com/library/daily/bldd022500.htm (free download) 1 computer for each student Projector Copy of attached digital graphics 1 digital image of a full moon **Other Resources:** Flip book with "moving cartoon 1 rubric for each student



Student Template

Picture 3



Picture 4

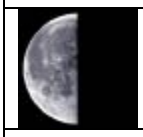
Picture 5

Picture 2

Picture 1

Picture 6








Animated Graphic Project Rubric

Student Name:

Teacher name:

	4	3	1
Planning	Student fully sketched a storyboard of the animated graphic, including precise order and color.	Student sketched a storyboard of the animated graphic, but is missing minor details .	Student did not sketch anything
Design	All colors and lines are clear, attractive, and eye-catching	Some of the colors and lines are clear and attractive, and the graphic is eye-catching	The colors and lines are unclear or unattractive. The graphic doesn't hold someone's attention
Animation	Animation loads quickly and works smoothly.	Animation loads and works, but takes a little time.	Animation doesn't load or work properly
Understanding	The student has an exceptional understanding of the material included in the product.. Can easily answer questions about the content and procedures used to develop the graphic.	The student has a good understanding of the material included in the product. Can easily answer questions about the content and procedures used to develop the graphic	The student has lilttle understanding of the material included in the product.. Unable to answer basic questions about the content and procedures used to develop the graphic.
Accuracy	Graphic demonstrates accurate order of the lunar cycle	Graphic demonstrates the order of the lunar cycle with only a few mistakes	Graphic does not correctly demonstrate the order of the lunar cycle
Saving	Project saved to correct location		Graphic not saved to correct location
File Naming	Graphic follows file naming procedure		Graphic does not follow file naming procedure