

## Instructional Recipe

# Why is the Water Cycle So Important?

Fifth Grade, Science & Language Arts

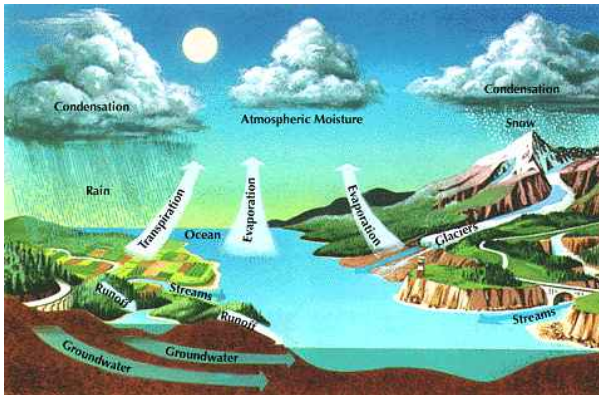
### Step 1 – Ask

#### Objectives:

Students will develop a fictionalized story in which they imagine themselves as a part of the water cycle. Within the story students will incorporate an explanation of the water cycle and its importance.

#### Introduction:

Ask students where water goes when it evaporates. Ask them where it comes from when it rains. Review what students know about the water cycle.



"water: water cycle." Online Art. Encyclopædia Britannica Online School Edition. 29 July 2008 <<http://school.eb.com/elementary/art-67755>>

#### Ask:

- ★ What are the phases of the water cycle?
- ★ Why is the water cycle important?

#### Vocabulary:

- ★ water cycle
- ★ water vapor
- ★ atmosphere
- ★ precipitation
- ★ evaporation
- ★ transpiration
- ★ condensation

#### Science TEKS:

(5.6) **Science concepts.** (B) identify the significance of the water, carbon, and nitrogen cycles;

#### English/Language Arts TEKS:

(15) **Writing/Writing Process.** (A) plan a first draft by selecting a genre appropriate for conveying the intended meaning to an audience, determining appropriate topics through a range of strategies (e.g., discussion, background reading, personal interests, interviews), and developing a thesis or controlling idea; (B) develop drafts by choosing an appropriate organizational strategy (e.g., sequence of events, cause-effect, compare-contrast) and building on ideas to create a focused, organized, and coherent piece of writing; (C) revise drafts to clarify meaning, enhance style, include simple and compound sentences, and improve transitions by adding, deleting, combining, and rearranging sentences or larger units of text after rethinking how well questions of purpose, audience, and genre have been addressed; (D) edit drafts for grammar, mechanics, and spelling; and (E) revise final draft in response to feedback from peers and teacher and publish written work for appropriate audiences.

(16) **Writing/Literary Texts.** (A) write imaginative stories that include: (i) a clearly defined focus, plot, and point of view; (ii) a specific, believable setting created through the use of sensory details; and (iii) dialogue that develops the story;

(28) **Listening and Speaking/Speaking.** Students speak clearly and to the point, using the conventions of language. Students continue to apply earlier standards with greater complexity. Students are expected to give organized presentations employing eye contact, speaking rate, volume, enunciation, natural gestures, and conventions of language to communicate ideas effectively.

#### Technology Application TEKS:

(4A) apply appropriate electronic search strategies in the acquisition of information including keyword and Boolean search strategies.

(5A) acquire information including text, audio, video, and graphics.

(7B) use appropriate software to express ideas and solve problems including the use of word processing, graphics, databases, spreadsheets, simulations, and multimedia.

## Step 2 – Investigate

Search Encyclopaedia Britannica Online and EBSCO Kids Search using the phrase “water cycle”.

- ★ "water." Britannica Elementary Encyclopedia. 2008. Encyclopædia Britannica Online School Edition. 11 July 2008  
<<http://school.eb.com/elementary/article?articleId=390625>>.
- ★ [Watch the Water Cycle](#). Science Spin - Primary, Apr2005, p2-3, 2p; (AN 16590726)
- ★ [Follow a Drop of Water](#). Weekly Reader News - Edition 4, 2/21/2003 Teacher's Guide, Vol. 84 Issue 19, p6, 1p; (AN 9095850)

### Additional Websites:

- ★ The Water Cycle-  
<http://www.units.muohio.edu/dragonfly/water/watercycle.shtml>
- ★ The Water Cycle (USGS)- <http://ga.water.usgs.gov/edu/watercycle.html>
- ★ Thirstin's Water Cycle-  
[http://www.epa.gov/OGWDW/kids/flash/flash\\_watercycle.html](http://www.epa.gov/OGWDW/kids/flash/flash_watercycle.html)

### Books:

- ★ *Did a Dinosaur Drink this Water?* by Robert Wells
- ★ *A Drop in the Ocean: The Story of Water* by Jacqui Bailey
- ★ Atlases



## Step 3 – Create

### **Note taking:**

Students will create a sketch diagram of the water cycle labeling all important stages, using correct vocabulary. Students will jot their story ideas down around the edges of the diagram (see Step 4 for project).

- 🔗 Technology Link – Students can use a graphic organizer program such as Kidspiration to create the diagram.

#### Step 4 – Discuss

##### Water Cycle Stories:

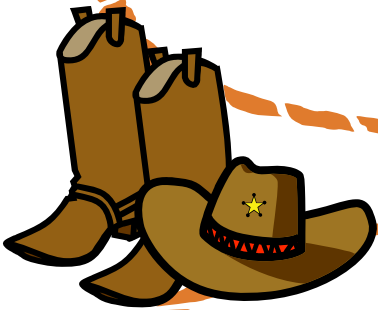
Students will write a water cycle story, imagining they are a molecule of water (then water vapor) in that cycle. The story should include all relevant stages of the cycle as well as details including specific geographic locations.

Example: It was a very hot day in Utah, and I was enjoying my time in the Great Salt Lake...

Students will incorporate into their stories an explanation of why the water cycle is important.

After students have had opportunities to draft, revise, and edit the stories, they should present their stories to the class.

🔗 Technology Link – Students can use a word processing program to type their stories.



#### Step 5 – Reflect

Allow students to present their projects to the rest of the class. Use the following suggested rubric to assess the students' work. Make sure that the students are familiar with the rubric *before* they begin creating their project. They should refer to the rubric repeatedly to monitor their progress in creating their project.

🔗 Technology Link: You can also create your own rubric with your students at <http://rubistar.4teachers.org/index.php>.

## Rubric—Water Cycle Story

CATEGORY	4	3	2	1
<b>Focus on Assigned Topic</b>	The entire story is related to the assigned topic and allows the reader to understand much more about the topic.	Most of the story is related to the assigned topic. The story wanders off at one point, but the reader can still learn something about the topic.	Some of the story is related to the assigned topic, but a reader does not learn much about the topic.	No attempt has been made to relate the story to the assigned topic.
<b>Organization</b>	The story is very well organized. One idea or scene follows another in a logical sequence with clear transitions.	The story is pretty well organized. One idea or scene may seem out of place. Clear transitions are used.	The story is a little hard to follow. The transitions are sometimes not clear.	Ideas and scenes seem to be randomly arranged.
<b>Accuracy of Facts</b>	All facts presented in the story are accurate.	Almost all facts presented in the story are accurate.	Most facts presented in the story are accurate (at least 70%).	There are several factual errors in the story.
<b>Title</b>	Title is creative, sparks interest and is related to the story and topic.	Title is related to the story and topic.	Title is present, but does not appear to be related to the story and topic.	No title.
<b>Creativity</b>	The story contains many creative details and/or descriptions that contribute to the reader's enjoyment. The author has really used his imagination.	The story contains a few creative details and/or descriptions that contribute to the reader's enjoyment. The author has used his imagination.	The story contains a few creative details and/or descriptions, but they distract from the story. The author has tried to use his imagination.	There is little evidence of creativity in the story. The author does not seem to have used much imagination.
<b>Writing Process</b>	Student devotes a lot of time and effort to the writing process (prewriting, drafting, reviewing, and editing). Works hard to make the story wonderful.	Student devotes sufficient time and effort to the writing process (prewriting, drafting, reviewing, and editing). Works and gets the job done.	Student devotes some time and effort to the writing process but was not very thorough. Does enough to get by.	Student devotes little time and effort to the writing process. Doesn't seem to care.

## Rubric—Water Cycle Story Oral Presentation

CATEGORY	4	3	2	1
<b>Preparedness</b>	Student is completely prepared and has obviously rehearsed.	Student seems mostly prepared but might have needed a couple more rehearsals.	The student is somewhat prepared, but it is clear that rehearsal was lacking.	Student does not seem at all prepared to present.
<b>Speaks Clearly</b>	Speaks clearly and distinctly all (100-95%) the time, and mispronounces no words.	Speaks clearly and distinctly all (100-95%) the time, but mispronounces one word.	Speaks clearly and distinctly most (94-85%) of the time. Mispronounces no more than one word.	Often mumbles or can not be understood OR mispronounces more than one word.
<b>Posture and Eye Contact</b>	Stands up straight, looks relaxed and confident. Establishes eye contact with everyone in the room during the presentation.	Stands up straight and establishes eye contact with everyone in the room during the presentation.	Sometimes stands up straight and establishes eye contact.	Slouches and/or does not look at people during the presentation.
<b>Volume</b>	Volume is loud enough to be heard by all audience members throughout the presentation.	Volume is loud enough to be heard by all audience members at least 90% of the time.	Volume is loud enough to be heard by all audience members at least 80% of the time.	Volume often too soft to be heard by all audience members.
<b>Listens to Other Presentations</b>	Listens intently. Does not make distracting noises or movements.	Listens intently but has one distracting noise or movement.	Sometimes does not appear to be listening but is not distracting.	Sometimes does not appear to be listening and has distracting noises or movements.