



Lesson 5

Introduction – Water We Talking About?



Learning Standards & Assessment



Time



Resources



Activities



Handouts



Video





Arts Education (Music)

Big Ideas

- ▶ Dance, drama, music, and visual arts are each unique languages for creating and communicating.

Content

- ▶ Elements in the arts
 - Music: beat/pulse, duration, rhythm, tempo, pitch, timbre, dynamics, form, texture
- ▶ Symbolism as a means of expressing specific meaning
- ▶ Personal and collective responsibility associated with creating, experiencing, or sharing in a safe learning environment

Science

Big Ideas

- ▶ Water is essential to all living things, and it cycles through the environment.

Content

- ▶ The water cycle



30-45 minutes

Lesson 5d: Water Cycle

Purpose

As part of the exploration of the physical properties of water, this lesson applies and summarizes knowledge of the states of matter (liquid, solid, and gas) and processes (evaporation, precipitation, condensation) through exploration of the water cycle.

Preparation

1. Bring in a bicycle (optional), or a picture of a familiar lifecycle.
2. Set up the audio equipment and the song *Drop, Drip, Drop*, and arrange the room so that students have space to move.
3. Photocopy “Water Cycle Song Lyrics” with or without gestures and a “Cycle” Word Map (one each per student or group).

Procedure

Warm up

1. If animal life cycles have already been studied, post a familiar cycle; alternately, turn a bicycle on its seat, or show a picture of a bicycle.
2. Lead a short discussion to determine what a bicycle is (e.g. what does bicycle mean? two cycles. What are the two bicycles? the wheels. What do they do? Go around and around. What other cycles do you know? seasons, moon, merry-go-round, rides at a fair etc.
3. If they don’t guess, suggest water has a cycle too.

Water Cycle Song

1. Optional - watch a video of students performing the “Water Cycle Song.”
2. Distribute and read the lyrics together. Stop after each line to confirm understanding and pick gestures to represent the water cycle processes. e.g. Water travels in a cycle, yes it does. What’s a cycle? *An action or event that repeats- happens over and over again.* How can we show that with our hands/bodies? *Draw a circle in the air with one hand, spin slowly on the spot.*



Educator's Kits, including hardcopy lesson plans and support materials, are available for loan through the CRD. For pickup locations, print-friendly materials and multimedia tools see www.crd.bc.ca/teacher or contact the CRD at 250.360.3133.

Teacher Resources

- ▶ Assessment Tool: "Water Cycle" Answer Key
- ▶ "Kooshball Questions"

Student Resources

- ▶ Word Map : cycle (1/student)
- ▶ "Water Cycle Song" (1/student)

Lesson Resources

- ▶ Bicycle - actual, picture OR a picture of familiar lifecycle
- ▶ Soft ball
- ▶ computer and projector (SmartBoard or PowerPoint activities)

Note : Runoff will be explored more in Lesson 6 . "Water runs off", a play on words with runoff- water that flows over land (creeks, streams, rivers, roads, fields, lakes...)

3. Lead students through singing and gesturing to the song.
4. Have students draw and/or label the water cycle on the bottom of the lyrics sheet and place in their Water Portfolio.

Word Map

1. Have students create a word map and place it in their Water Portfolios.

Cycle- a series of events repeated in the same order

Review - Snowflake Kooshball

1. Divide class into two or have the class compete against the teacher.
2. Students take turns throwing the ball at the board. Where the ball hits, indicates a question to be asked. Students may negotiate amongst themselves for the answer, but the person throwing will answer for the group. Use Smartboard or PowerPoint games or recreate the game on any board, number the snowflakes and ask the provided "KooshBall Questions".



Extensions and Adaptations

Music

- ▶ Variations
 - change tempo, timbre, pitch while singing e.g. 'goes up' higher pitch, 'comes down' lower pitch.
 - add instruments or sounds to represent the water cycle processes and the forms of water e.g. precipitation- tap fingers on the table for rain.
 - divide gestures- e.g. some students clasp hands overhead (sun) while the rest motion evaporation, some pretend to freeze while others snow.
 - Assign roles- divide class into three. Group one gestures evaporation, group two condensation, group three precipitation then run off to stand where group one is standing- the other groups move down. Continue until everyone has made a complete cycle.
- ▶ Create a music video, video recording, animation or slideshow (SmartBoard or PowerPoint). Share it at www.crd.bc.ca/teacher
- ▶ Performance- have students perform the water cycle song to parents, other classes or the community, or record and share your performance with us and other schools. To submit your video go to www.crd.bc.ca/teacher

 **Curricular Competencies**

Look for evidence that students are able to:

Arts Education

- ▶ Exploring and creating
 - Explore elements, processes, material, movements, technologies, tools, and techniques of the arts
 - Create artistic works collaboratively and as an individual using ideas inspired by imagination, inquiry, experimentation, and purposeful play

 **Curricular Integration****Science**

- ▶ Water cycle in a jar. Either demonstrate or have students do it themselves- in small groups. In the following order, place in a jar or clam shell container: small rocks, sand, soil, a small bowl of water, and a plant, then cover with the lid. Place the container on a sunny windowsill. What happens? (evaporation) Put the jar in a cool place. What happens? (condensation) Can you see precipitation?
- ▶ Why is it colder on the top of a mountain than in the city? In this YouTube video, Bill Nye the Science Guy explains why it snows on the mountain but will rain in the city.
www.youtube.com/watch?v=gGNxYtT_36I
- ▶ Other water songs
 - Listen at **<http://havefunteaching.com/songs/science-songs/water-cycle-song/>**
 - Listen at **<http://havefunteaching.com/songs/science-songs/weather-song/>**

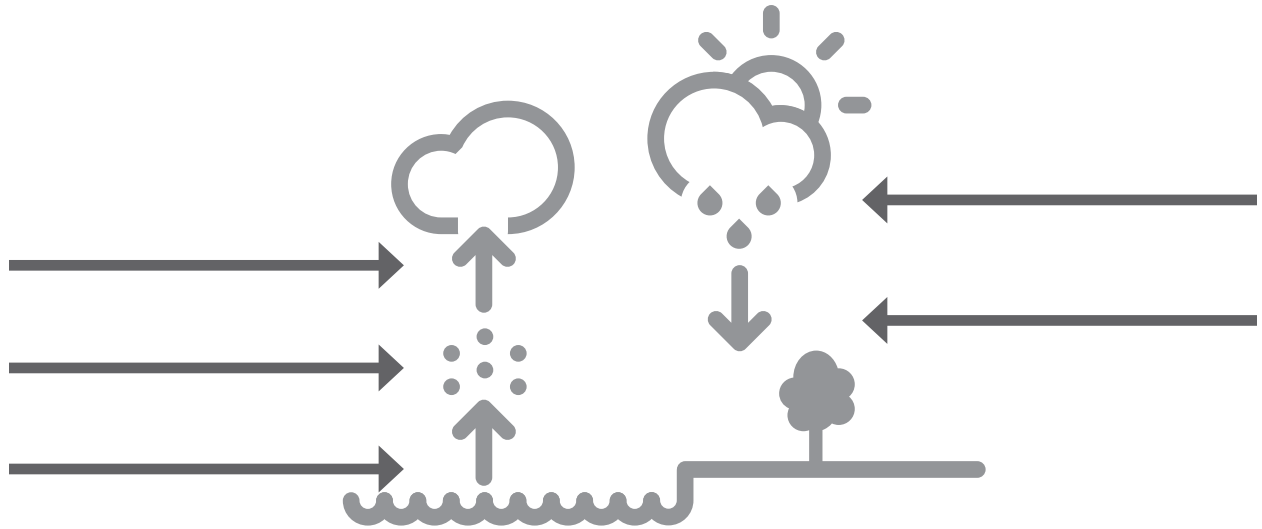


Kooshball Questions

1. What is a cycle?
2. What is precipitation?
3. What is condensation?
4. What is evaporation?
5. What is an example of water vapour?
6. What is an example of liquid water?
7. What is an example of solid water?
8. When water freezes it becomes ...
9. When water boils it becomes...
10. When water vapour cools it
11. Is lake water fresh or salty?
12. Is ocean water fresh or salty?
13. What form of water is fog?
14. What form of water is hail?
15. What form of water is rain?
16. What form of water is snow?
17. Another word for snow, hail or rain falling from the sky is...
18. True or false- Water vapour can change shape.
19. True or False- Liquid water can change shape.
20. True or False- Solid water can change shape.



The Watercycle



Forms (water)

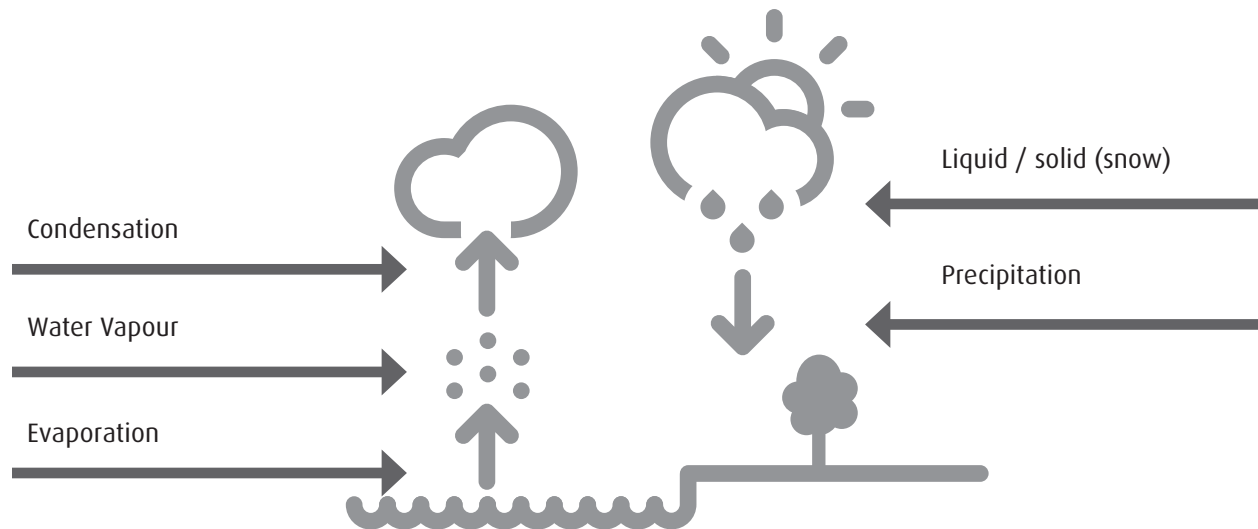
- ▶ Liquid
- ▶ Solid
- ▶ Vapour

Changes (arrows)

- ▶ Evaporation
- ▶ Condensation
- ▶ Precipitation



The Watercycle - Answer Key



Forms (water)

- ▶ Liquid
- ▶ Solid
- ▶ Vapour

Changes (arrows)

- ▶ Evaporation
- ▶ Condensation
- ▶ Precipitation



Water Cycle Song (with gestures)

Sing-a-long to "She'll be Coming Round the Mountain"

Name: _____ Date: _____

Water travels in a cycle

spin on the spot, with one hand making a circle overhead, like a lasso

Yes it does.

standing, facing front again

Water travels in a cycle

spin on the spot, with one hand making a circle overhead, like a lasso

Yes it does.

standing, facing front again

It goes up as evaporation,

making vertical wave motions with hands, raise them up overhead

And forms clouds as condensation,

and bring hands together to form a cloud

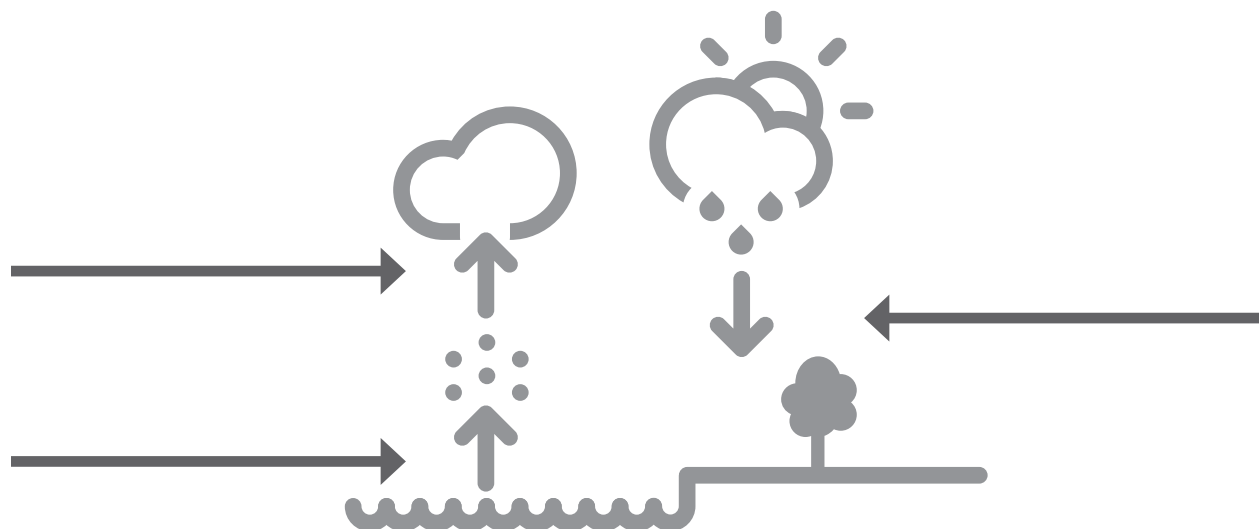
Then comes down as precipitation

separate hands and wiggle fingers as arms are lowered, crouching down to the ground

And runs off

Running on the spot

Label the water cycle: evaporation, condensation, precipitation



The Water Cycle



Water Cycle Song

Sing-a-long to "She'll be Coming Round the Mountain"

Name: _____ Date: _____

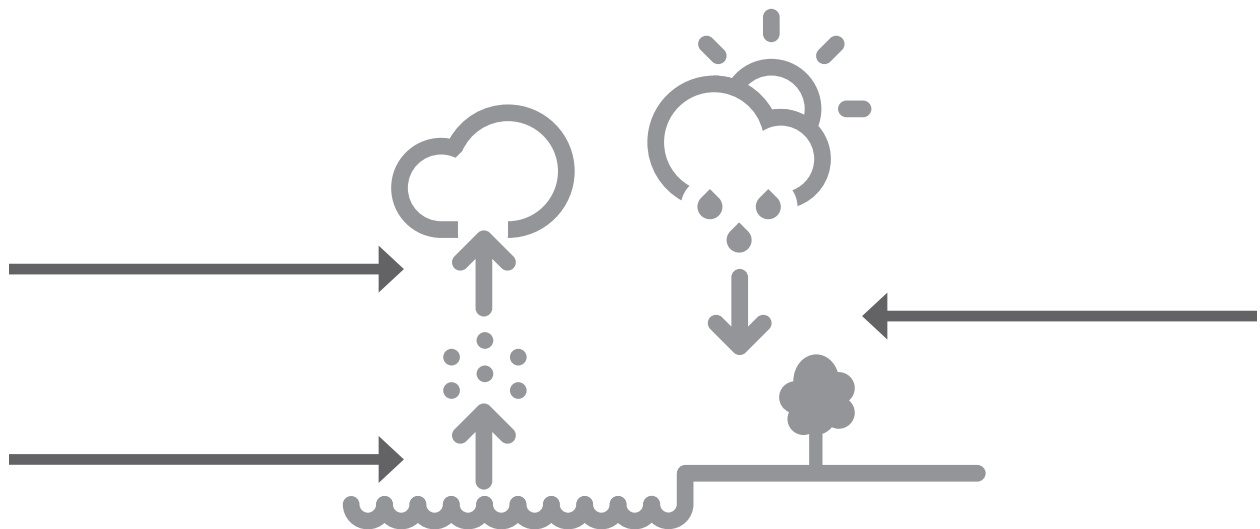
chorus *Water travels in a cycle*
Yes it does
Uh huh
Water travels in a cycle
Yes it does
Uh huh

verse 1 *It goes up as evaporation,*
And forms clouds as condensation,
Then comes down as precipitation
And runs off

chorus *Water travels in a cycle*
Yes it does
Uh huh
Water travels in a cycle
Yes it does
Uh huh

verse 2 *It goes up as evaporation,*
And forms clouds as condensation,
Then comes down as precipitation
And runs off

Label the water cycle: evaporation, condensation, precipitation



The Water Cycle



Water Cycle Song

Sing-a-long to "She'll be Coming Round the Mountain"

Name: _____ Date: _____

chorus *Water travels in a cycle
Yes it does
Uh huh
Water travels in a cycle
Yes it does
Uh huh*

verse 1 *It goes up as evaporation,
And forms clouds as condensation,
Then comes down as precipitation
And runs off*

chorus *Water travels in a cycle
Yes it does
Uh huh
Water travels in a cycle
Yes it does
Uh huh*

verse 2 *It goes up as evaporation,
And forms clouds as condensation,
Then comes down as precipitation
And runs off*

Draw and label the water cycle: evaporation, condensation, precipitation

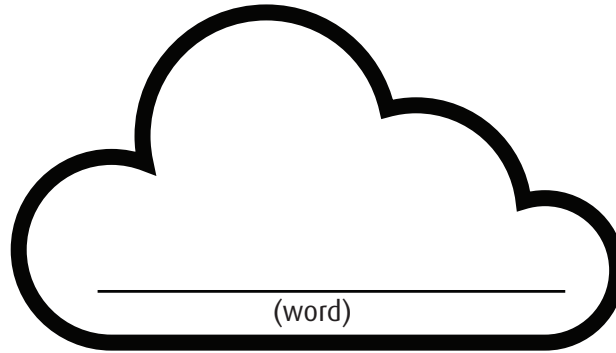
The Water Cycle



Water Word Map



Name: _____ Date: _____



Draw it:

Define it:

Use it in
a sentence:

