WATER, WATER EVERYWHERE

Module Overview

Target Language: Arabic	**Grade Level**: 2
Proficiency Level: Junior Novice Low	
Summary: Students will discover that much of the Earth is made up of water. They will identify various bodies of water and name the three states of water.	
Enduring Understanding: There is more water than land on Earth and water can be found in different places and forms.	
Essential Questions: Where can we find water? What happens to water?	

Standards Targeted	
5C – World Language Standards	**5E – STEM Standards**
Communication • Students understand spoken and written language on very familiar topics in the target language that promote the learning of basic linguistic structures. (1.2A) • Students engage in brief exchanges about personal interests. (1.3A) **Connections** • Students access new information and reinforce existing knowledge of other content areas through the target language (3.1A)	**2.ECS Earth's Changing Surface** Students who demonstrate understanding can: a. Obtain and communicate information that water exists in different forms within natural landscapes and determines the variety of life forms that can live there. **Technology** 1. A.1 Use and understand how technology enhances learning 3. C.1 Use and understand how technology increases productivity 4. A.1 Identify and understand how technology is used for communication 4. B.1 Identify and understand how technology is used to express ideas **Math Common Core** 1. MD. 4 Organize, represent, and interpret data with up to three categories. K. MD. 2 Describe and Compare measurable attributes. K. MD. 3 Classify Objects and count the number of objects in each category. PK. MD. 4 Compare categories using words such as more or same

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Knowledge: Students will know…	Skills: Students can…
Vocabulary • Bodies of water • 3 states of water • Water cycle Expressions and patterns: • Where and what patterns • More or less • Be able to make simple statements • Be able to ask and answer simple questions	1. Identify and name bodies of water. 2. Name the 3 states of water (solid, liquid and gas states) 3. Express that there is more water than land on Earth.

Module Duration and Lessons: Five 30-minute lessons

Lesson 1 – Where in the World is Water? **الدرس الأول: الماء الماء هنا وهناك، في كل مكان**
Lesson 2 – Where Does Water Go? **الدرس الثاني: أين يذهب الماء؟**
Lesson 3 – Is Water Always Water? **الدرس الثالث – هل الماء دائماً ماء؟**
Lesson 4 – How Does Water Change? **الدرس الرابع: لماذا يتغير الماء؟**
Lesson 5 – Assessment Task الدرس الخامس- نشاط تقييمي

Performance Assessment:	What culminating performance tasks will provide evidence that students have achieved the program learning objectives? Consider providing opportunities for students to be assessed for each mode of communication through interpretive, interpersonal and presentational performance tasks. However, for students at this age group, assessment may be integrated.

Materials/Resources

- World map or globe, preferably in blue and green
- Puppet/mascot
- Plastic duck
- Map of Maryland (ocean, rivers are in blue and lands are in green color)
- Smart Board (optional)
- Blue and green crayons
- Blue and green sticky notes
- Computers with drawing program
- Paper
- Pencils
- Slide show: "Little Duck is Hungry"
- *Itsy Bitsy Spider songs*
  - English: http://bit.ly/oSAGG4
  - Spanish: http://bit.ly/r7u0kg
  - Arabic: http://bit.ly/A2ILir
- Worksheet 1a
- Worksheet 2a, 2b, 2c, 2d
- Worksheet 3a, 3b, 3c
- Worksheet 4a, 4b

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STEM Background for teachers: (identified and provided by a STEM teacher/resource person)

Water: Almost 70% of Earth's surface is covered by water.

Water Cycle: The water cycle begins with heat from the sun. Land and water on Earth absorb the heat's energy. Some of that energy warms the air above the surface of the earth. When air gets cooler, water vapor in the air **condenses**. That means that it changes to tiny droplets of **liquid** water. As the water droplets increase, they clump together to form a cloud. When the drops become too heavy to stay suspended in the air, they fall to Earth's surface. Water that falls to Earth's surface is called **precipitation—**known as **rain water**. Once on Earth's surface, rainwater may enter various bodies of water or the soil, or be used by millions of living organisms. Rainwater can also **evaporate** and change to **gas**. This gas is called water vapor. The water vapor, or gas, will then enter the air above Earth's surface. The heat from the sun speeds up the process of evaporation. At this point, the water cycle is completed.

Bodies of Water: Water can be found as ice in polar icecaps and glaciers. Fresh water can be found in streams, lakes, rivers, ponds, swamps, and marshes. Oceans and seas contain salt water. Oceans, seas, and bays cover much of the earth's surface and hold over 97% of Earth's water.

Phases of Water: Below 0°C (32°F) water molecules hold together and form a **solid** block we call **ice.** Heat melts ice and turns it back to **liquid** we call **water**. If more and more heat is added, the liquid will eventually turn to **gas**.

Note to teacher about the overall approach to introducing new vocabulary:

In general we suggest that it is best to avoid the question "What's this?" even if the teacher immediately supplies the answer. For that matter, it is best never to ask a question for which the only possible student answer would be in English. Instead, the teacher creates a context for introducing the vocabulary item, an approach common to Natural Approach and TPRS. For example, "I'm thirsty, and I want some water. Oh look! Here is some water. (Drinking) Good water. I like to drink water." Teacher takes a glass half full of water and hands it to a child: "Here, take the water. Don't spill the water! Give the water to (name of another child)." And so on. This way the learners associate the new vocabulary with an experience. Then the teacher can go on to point to different examples and ask if they are water or not (some should be water, some not). Then it is an easy transition to the globe and the map: ("This is a globe/map. The globe/map gives us a picture of the water and the land on the Earth. Look: the blue on the globe/map is a picture of the water. Look, this isn't blue. Is it water? Right—it isn't water. This is land. We can stand on land. Can we stand on water?" And so on.)

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Lesson 1- Where in the World is Water?
الدرس الأول: الماء الماء هنا وهناك، في كل مكان

<table>
<tr><td colspan="2">Lesson 1 of 5
 Duration: 30 Minutes</td></tr>
<tr><td>Objectives</td><td>I Can:
Oral language:
• Name Earth, land, and water.
• Tell that there is more water than land on Earth.
Literacy:
• Recognize the words ماء and أرض/تراب.
STEM and Other Subject Areas:
• Identify water and land on Earth.
• Show more and less as related to water and land on Earth.</td></tr>
<tr><td>Performance Assessment</td><td>Students make a presentation about their findings: (1) locate water and land on the Earth; (2) there is more water on Earth.</td></tr>
<tr><td>Vocabulary and Expressions</td><td>Recycled

ماذا؟

ما لون...؟
أزرق
أخضر
صحيح / يمين
نعم
لا</td><td>New

هل هذا؟
هذا.../هذه...

أين...؟
هنا...

الأرض
العالم
خريطة
أرض/تراب
ماء
أكثر (من)
أقل (من)</td></tr>
<tr><td>Materials/Resources</td><td colspan="2">○ Plastic balloon globes or maps
○ Visuals of water (Worksheet 1a)
○ 2 clear plastic glasses of water: one full, one not
○ Blue and green crayons
○ Blue and green sticky notes (enough to cover world map)
○ Puppet</td></tr>
</table>

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Key Elements	Lesson 1 Procedures
Engagement ● Object, event or question used to engage students. ● Connections facilitated between what students know and can do	**Introduce** ماء **and** أرض/تراب**.** T: (Gesturing thirst) أنا عطشانة**!** أريد ماء**!** (sees half glass of water on the desk) انظر**!** هناك ماء**!** T: (Teacher takes another glass half full of water and hands it to a child) تفضل**!** خذ الماء. لا تكُب الماء**!** اعطِ الماء إلى...(اسم تلميذ آخر) Teacher directs the children to pass the water around in this way, sometimes varying with اعطني الماء, and finishing the activity with اعطني الماء. T: أين نستطيع أن نجد الماء؟ (Pointing at one of the pictures from **Worksheet 1a**) هل هناك ماء هنا؟ T: (Have a volunteer point to the water. If there is water in the classroom, such as a fish tank or a sink, invite a volunteer to look for water in the classroom. While they look, lead the class in a chant.) ماءٌ**!** ماءٌ**!** أين الماء؟**!** **Students identify** ماء **and** أرض **on the map** T: (Looking at the map or globe): هذه كرة أرضية جغرافية، هذه خريطة. الكرة الأرضية الجغرافية/الخريطة تعطينا صورة للماء والأرض في العالم. T: (Pointing at water on the map) انظر، ما هذا اللون؟ S: أزرق T: هناك كثير من الأزرق أليس كذلك؟ الأزرق على الخريطة يعني هناك ماء. انظر، هذا ليس أزرق. ما هذا اللون؟ S: أخضر *Green.* T: هل هو ماء؟ صحيح**!** هذا ليس ماء. هذا أرض. نستطيع أن نقف على الأرض. هل نستطيع أن نقف على الماء؟ T: (Looking at the map and asking puppet) أين الماء/أين الأرض على الخريطة؟ P: (Puppet pointing at the water/land) ها هو الماء**!**/ ها هي الأرض**!** T: (Looking at the map and asking puppet) أين الماء/أين الأرض على الخريطة؟ S: (Puppet pointing at the water/land) ها هو الماء**!**/ ها هي الأرض**!** ● Repeat sequence
Exploration ● Objects and phenomena are explored. ● Hands-on activities, with guidance.	**Re-introduce colors** أخضر **and** أزرق**.** T: (Holding a blue crayon and asking) دميتي، ما هذا اللون؟ P: إنه أزرق**!** T: قف إن كنت تلبس أزرق أو إن كنتِ تلبسين الأزرق T: (Holding a green crayon and asking students) ما هذا اللون؟ S: إنه أخضر**!** T: قف إن كنت تلبس شيئاً أخضر أو إن كنت تلبسين شيئاً أخضر ● Have students hold up different blue/green objects ● Have volunteers find something blue/green in the classroom.

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Key Elements	Lesson 1 Procedures
	Make the color connection to ماء **and** أرض**.** T: (Referring to a map) ما لون الماء على الكرة الأرضية الجغرافية/الخريطة؟ S: أزرق T: صحيح! هو أزرق! الماء أزرق. هناك أزرق كثير في الخريطة/الكرة الأرضية الجغرافية T: (Pointing to green land) ما هو لون الأرض على الكرة الأرضية الجغرافية/الخريطة؟ S: أخضر T: نعم أخضر. الأرض خضراء • Invite a few individual students to point to water/land on the map. T: (Modeling) هذا ماء/هذه أرض. هوأزرق/هي خضراء S: (Pointing and saying) هذا ماء/هذه أرض. هوأزرق/هي خضراء
Explanation ● Students explain their understanding of concepts and processes. ● New concepts and skills are introduced as conceptual clarity and cohesion are sought.	**Introduce the concept of** أكثر **and** أقل**.** T: (Pouring water in two clear plastic containers, one with more water and one with less, far apart from each other) أيهم فيه ماء أكثر؟ أشِر إلى الكأس الذي فيه ماء أكثر. T: (Switching containers back and forth) أيهما فيه ماء أكثر؟ (Pointing to the glass with more water.) T: (Switching containers back and forth) أيهما فيه ماء أقل؟ (Pointing to the glass with less water.) T: (Help students to become familiar with the concept and vocabulary by comparing various quantities of classroom materials.) **Students identify water and land on the map with sticky notes.** T: (Modeling by putting a sticky note on the map) هذا أزرق/هو ماء. T: (Looking at the map and putting the blue sticky note on water) هذا ماء. T: (Modeling by putting a sticky note on the map) هذه خضراء/هذه أرض. T: (Looking at the map and putting the green sticky note on land) هذه أرض. • Ask volunteer students to place additional blue/green sticky notes on water/land on the map. While the student puts the sticky note on the map, he/she also identifies its color and explains what it represents. • Repeat this activity until the map is covered.
Elaboration ● Activities allow students to apply concepts in contexts, and build on or extend understanding and skill.	**Discuss** أكثر **and** أقل **as related to water and land** T: (Going to the map and asking students to predict) ما هو الأكثر، الأزرق أو الأخضر؟ T: من يقول أن هناك أزرق أكثر من أخضر/أخضر أكثر من أزرق؟ ارفعوا أيديكم. Invite students to answer. Tally their answers on the board. (To be used for discussion with students later.)

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Key Elements	Lesson 1 Procedures
	Transfer and count all the blue and green sticky notes to show that there is more water than land T: (Taking one blue sticky note and placing it on the board - one column for blue/water and the other for green/land). T: (Modeling while transferring the notes): هذا أزرق/هذا ماء T: (Invite students to continue to transfer the notes. Ask them to explain what color is it and what it represents. Put the color sticky under the appropriate column). T: أزرق للماء وأخضر للأرض S: أزرق للماء وأخضر للأرض
Evaluation ● Students assess their knowledge, skills and abilities. Activities permit evaluation of student development and lesson effectiveness.	**Guide students to come to a conclusion that there is more water than land on the Earth** T: (Pointing at the board with sticky notes): هل هناك أوراق زرقاء لاصقة أكثر أم أوراق خضراء أكثر؟ S: (Probably) أزرق! T: (Pointing to the tally to verify) نعم! هناك أوراق زرقاء أكثر. هيا ننظر إلى الخريطة. T: (Pointing at the map) هذا ماء وهذه أرض. أيهم أكثر؟ S: الماء T: (Pointing the map) هذا ماء وهذه أرض. هناك ما أكثر في العالم. • Invite students to come to front to present their findings.

Teacher Reflection Lesson 1- *Where in the World is Water?*	
What worked well?	
What did not work well?	
What would I do differently?	
Other comments or notes	

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Lesson 2 – Where Does Water Go?

الدرس الثاني: أين يذهب الماء؟

Lesson 2 of 5	Duration: 30 Minutes
Objectives	***I Can:*** Oral language: • Name the bodies of water: سيل, نهر, خليج, بحر • Use the word بط in short expressions Literacy: • Recognize the words سيل, نهر, خليج, بحر, أكل, and بط STEM and Other Subject Areas: • Identify bodies of water
Performance Assessment	Students will demonstrate how water flows from Maryland streams to rivers, the bay, and to the ocean.
Vocabulary and Expressions	سيل نهر خليج بحر بط يسبح/يعوم أكل يعيش/عاش جوعان عطشان قمامة
Materials/Resources	○ Plastic globe or world map ○ Map of Maryland with ocean, rivers, and bay in blue and land in green. ○ Slide show – "Little Duck Is Hungry" (**Worksheet 2a**) ○ Toy duck or puppet ○ Photos of Little Duck story (**Worksheet 2b**, group sets) ○ Vocabulary flash cards (**Worksheet 2c**) ○ Maryland Waterways pictures (**Worksheet 2d**)

Key Elements	Lesson 2 Procedures
Engagement • Object, event or	**Introduce map of Maryland** T: (Reviewing water/land on globe or map.) هل هذا ماء؟ هل هذه أرض؟

Key Elements	Lesson 2 Procedures
question used to engage students. ● Connections facilitated between what students know and can do	S: (Answer accordingly) T: (Asking the puppet) أين ماريلند؟ P: (Puppet answers, pointing to the map of Maryland) هنا! T: (Pointing at the map of Maryland) هذه خريطة ماريلند. أنا أسكن هنا. T: (Putting teacher-made cut out drawings of houses and stick figures of people on the map) هل تسكن/تسكنين في مريلند؟ S: نعم T: (Holding globe/or pointing to the map) أين نسكن؟ S: (Pointing): هنا **Introduce flow of water from stream to ocean** T: (Pointing to increasingly smaller bodies of water on the map of Maryland) هذا ماء/ هذا بحر/ هذا خليج/ هذا سيل/ هذا نهر Reintroduce أكثر by asking أيهم فيه ماء أكثر، البحر أو الخليج؟ السيل أو النهر؟ T: ما لون الماء/الأرض في الخريطة؟ S: أزرق/ أخضر T: ما لون البحر (الخليج/النهر/السيل) في الخريطة؟ S: أزرق T: (Pointing to the map) هل هذا ماء أو أرض؟ S: (Students answer accordingly*)* • Repeat this action/sequence a few times. Invite students to come to the map to point to water, and respond, نعم هذا ماء. هذا بحر/خليج/نهر/سيل If they seem ready, invite volunteers to play teacher, point to the map and ask a question or make a statement.
Exploration ● Objects and phenomena are explored. ● Hands-on activities, with guidance.	**Introduce the story, "Little Duck Is Hungry"** T: (Puts a hand into a pocket or a magic box.) ما هذا؟ (Pause) (Pulls out a toy duck or puppet) هذا بط! انظر! آآآه! (Teacher acts very surprised.) من أين جاء هذا البط؟ T: (Holding the duck and walking among students) هل هذا بطك يا.../بطكي يا... *(Student name)?* (Repeat with several students.) S لا (most likely) *or* نعم. T: (Still holding the duck): هذا بطي! هو ليس كبير. سميته "بطي الصغير"(بطبوط) T: (Talking to the duck) بطبوط؟ سلّم على أصدِقائك هنا. P: مرحباً بكم يا أصدقائي T: والآن يا أصدقائي، سلّموا على بطبوط S: مرحباً بك يا بطبوط **Show students different possibilities where Little Duck might live** T: بطبوط يعيش في ماريلند. أين في ماريلند يعيش بطبوط؟ هل يعيش في الأرض؟ هل يعيش في الماء؟ S: (Answering according to question) T: نعم بطبوط يعيش في الأرض وفي الماء

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Key Elements	Lesson 2 Procedures
Explanation ● Students explain their understanding of concepts and processes. ● New concepts and skills are introduced as conceptual clarity and cohesion are sought.	**Introduce the story to show students how water flows from stream to ocean** T: (Showing picture of stream) بطبوط يسكن قريب من سيل صغير. كيف يعوم/يسبح من السيل إلى النهر؟ (Pause) يسبح/يعوم! (Gesturing or using TPR to facilitate understanding) أنا أستطيع أن أسبح/أعوم. *(Student name)* هل تستطيع أن تسبح؟ من يستطيع أن يسبح؟ ارفع/ارفعي يدك. T: (Holding the duck on the map and demonstrating the trip) يسبح/يعوم من السيل إلى النهر إلى الخليج ثم إلى البحر. T: (Gesturing or using TPR to facilitate understanding) رحلة بطبوط طويلة! وبطبوط جوعان! • Teacher will show the story "Little Duck Is Hungry," in which a little duck goes from his home in a Maryland stream to the Chesapeake Bay and on to the Atlantic Ocean. The story is translated into the target language and read aloud. Teacher asks guiding questions (using TPR gestures) while turning pages for a book walk. Students gesture or answer. T: أين يسكن بطبوط؟ T: بطبوط جوعان T: ماذا يريد بطبوط؟ T: أين يذهب؟ هل هذا نهر أو سيل؟ T: هل يجد أكل هناك؟ T: ماذا في النهر؟ هل هناك أكل أم قمامة في النهر(أو الخليج)؟ • Read story out loud to students, including content based questions such as those asked during the book walk.
Elaboration ● Activities allow students to apply concepts in contexts, and build on or extend understanding and skill.	**Show how water flows from streams to the ocean** T: أين يذهب بطبوط؟ هل يذهب من السيل إلى النهر؟ S: يذهب من السيل إلى النهر T: (Holding duck or puppet,) أين يذهب بطبوط؟ (Demonstrate using toy duck and map.) T: (Pointing to a student) أريني أين يذهب؟ T: (Giving each student a packet of photos from the Little Duck story (**Worksheet 2b**), students show Little Duck's trip through the waterways.
Evaluation ● Students assess their knowledge, skills and abilities. Activities permit evaluation of student	**Use the story pictures and show Maryland waterways on the map** • Students will line up the pictures (**Worksheet 2a**) according to how the water flows to the Bay (**Worksheet 2b**).

Key Elements	Lesson 2 Procedures
development and lesson effectiveness.	

Suggestions/ ideas:
Explanation: **Introduce a story to show students how water flows from stream to ocean**

Teacher can put blue construction paper, representing bodies of water, on the floor, and ask students to show Little Duck's trip.

Teacher Reflections on Lesson 2 – *Where Does Water Go?*	
What worked well?	
What did not work well?	
What would I do differently?	
Other comments or notes	

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Lesson 3 - Is Water Always Water?

الدرس الثالث – هل الماء دائماً ماء؟

Lesson 3 of 5	Duration: 30 Minutes
Objectives	***I can:*** Oral language: • Name the phases of the water cycle • Describe the weather in simple sentences. • Use the word حفنة ماء/قطرة ماء in short expressions. Literacy: • Recognize the words that describe the water cycle and related vocabulary*:* مشمس، ممطر، السحاب يملأ السماء، هناك ثلج على الأرض/الثلج يسقط STEM and Other Subject Areas: • Identify phases of the water cycle.
Performance Assessment	Students will describe the phases of the water cycle.
Vocabulary and Expressions	No new vocabulary or expression are introduced
Vocabulary and Expressions	حفنة ماء/قطرة ماء شمس/مشمس مطر/ممطر/ينزل المطر غيام/سحاب/السحاب يملأ السماء ثلج/هناك ثلج على الأرض/الثلج يسقط سماء هواء/الهواء الأحوال الجوية/الطقس حار بارد الدورة المائية ذاب/يذوب هذه ينشف كيف الطقس اليوم؟
Materials/ Resources	**Worksheet 3a** Water Cycle Small plastic spiders Enlarged visual made from Worksheet 3c *The Itsy Bitsy Spider* song/The water droplet song

	○ English: http://bit.ly/oSAGG4 ▪ http://www.youtube.com/watch?v=JYZTOdwE9eg&feature=related ○ Arabic song: حفنة ماء ▪ http://www.youtube.com/watch?v=NhNjDjEhxpk

Key Elements	Lesson 3 Procedures
Engagement ● Object, event or question used to engage students. ● Connections facilitated between what students know and can do	**Introduce weather changes** T: كيف الطقس اليوم؟ (Pause, looking out the window) (أو دافئ)حار/بارد أو ممطر/السحاب يملأ السماء/مشمس/ثلج/ هناك (Depending on the weather on that day and holding up the appropriate pictures.) T: (Engaging students in question) كيف الطقس اليوم؟ S: (أو دافئ)حار/بارد أو ممطر/السحاب يملأ السماء/مشمس/ثلج/ هناك T: (Using visuals of weather, Ask and answer the same questions.) كيف الطقس اليوم؟ S: (Answer according to the visuals) T: (Showing the video about weather without sound, narrate through the first set of pictures in Arabic.) http://www.youtube.com/watch?v=KgHe_I1x9W4 (أو دافئ)حار/بارد أو ممطر الطقس مشمس/السحاب يملأ السماء/الطقس/ هناك ثلج/ انظر! T: (Holding up the visuals, ask either/or questions.) هل السحاب تملأ السماء أم هل الطقس مشمس؟ هل هو مشمس أم ممطر؟
Exploration ● Objects and phenomena are explored. ● Hands-on activities, with guidance.	**(Sing Arabic song:** حفنة ماء **)** Before class, "hide" several cut-outs of water droplets around the classroom in obvious places. T: (Using TPR gestures and visuals, reinforce شمس, سحاب and introduce new vocabulary حفنة ماء/قطرة ماء) T: (Pretending to "find" one of the water droplets.) *انظروا! وجدت حفنة ماء/قطرة ماء. انظروا في الصف..هل ترون حفنة ماء/قطرة ماء أخرى؟ من يستطيع أن يجد حفنة ماء/قطرة ماء أخرى؟* T: (Calling on a volunteer to find another water drop, praise the child and hold up the two water drop cutouts.) هل عندي حفنة ماء/قطرة ماء واحدة أم اثنين؟ T: (Continue with additional volunteers and additional water drops. After several times of asking an either/or question) كم حفنة ماء لدينا الآن؟When all water drop cutouts have been found (or enough to continue), tell the class, أنا أعرف أغنية عن حفنة ماء/قطرة ماء...هل تعرفون هذه الأغنية؟ هي عن قطرة ماء صغيرة- حفنة ماء صغيييييرة جداً. Draw a rough picture of the sky and land on the board. T: (Using one of the water drop cut-outs, the picture of the sky and land, and pictures of the rain and the sun, sing the song and dramatize the action with the visuals): حفنة ماء/قطرة ماء T: Sing the song again, instead using familiar gestures for each line. Invite the children to do the gestures with you while you sing, and repeat several times.

Key Elements	Lesson 3 Procedures
	حفنة ماء ذات مساء طارت خلف طيور الماء قد ودعت البحر وطارت حتى ضاعت في الأجواء Teacher asks guiding questions (using TPR gestures). Students gesture or answer. T: هل تطير حفنة الماء؟ ماذا يطير؟ T: ماذا يضيع في الأجواء؟ T: هل ودعت حفنة الماء البحر؟ T: من ودعت البحر؟ T: Lead the students in singing the song again. T: (Show students the water droplet video if available) http://www.youtube.com/watch?v=NhNjDjEhxpk
Explanation ● Students explain their understanding of concepts and processes. ● New concepts and skills are introduced as conceptual clarity and cohesion are sought.	**Reinforce the concept of evaporation** Teacher asks follow-up questions (using TPR gestures). Students gesture or answer. T: هذه أغنية عن الماء والمطر (Hold up visual for rain.) المطر ماء! نعم! هل المطر ماء؟ T: (Hold up visual for snow) هل الثلج ماء؟ (Pause for student response. Maybe ask students to vote.) نعم! الثلج ماء أيضاً. T: (Hold up visual for clouds.) هل السحاب ماء؟ (Pause.) نعم! السحاب ماء أيضاً. T: (Holding up visual for sky.) أين تطير حفنة الماء/قطرة الماء؟ (Pause to see if children can complete the line). T: من أين ينزل المطر؟ (Pause.) ينزل من السماء T: هل السحاب فيها مطر؟ وهل الشمس وراء السحاب؟
Elaboration ● Activities allow students to apply concepts in contexts, and build on or extend understanding and skill.	**Introduce the concept that water can look different** T: (Holding pictures of clouds and sun, depicting heat energy) هذه سُحُب؟ هل هناك ماء في السُّحُب؟ *S:* نعم، هناك ماء في السُّحُب T: (Pointing to picture of clouds) هناك ماء كثير في السُّحُب. ماذا يحصل؟ (Pause) الماء سيسقط. الآن نسميه مطر! T: ماذا يسقط من السحاب؟ (Pause) المطر يسقط من السحاب. T: عندما يكون الطقس بارد جداً، ماذا يحصل؟ هل يسقط المطر أو الثلج؟ (Pause) يسقط الثلج • Teacher repeats sequence as necessary for comprehension. • Teacher uses enlarged picture of **Worksheet 3a** to repeat the stages of the water cycle, using the same sentences as those present on the worksheet, with some variations. After modeling, have several volunteers point to the

Key Elements	Lesson 3 Procedures
	part of the picture that fits the statement.
Evaluation ● Students assess their knowledge, skills and abilities. Activities permit evaluation of student development and lesson effectiveness.	**Students will identify the order of the phases of the water cycle.** Students will use pictures to describe the water cycle. **Worksheet 3a**

Teacher Reflections on Lesson 3 – *Is Water Always Water?*	
What worked well?	
What did not work well?	
What would I do differently?	
Other comments or notes	

WATER, WATER EVERYWHERE

Lesson 4 – Why Does Water Change?
الدرس الرابع: لماذا يتغير الماء؟

Lesson 4 of 5	Duration: 30 Minutes
Objectives	***I Can:*** Oral language: • Name the 3 states of water. Literacy: • Recognize the words: جامد، سائل، مبخر STEM and Other Subject Areas: • Name the states of water • Tell why water changes
Performance Assessment	Students will categorize the different states of water.
Vocabulary and Expressions	جامد غاز سائل ثلج بخار جليد هواء
Materials/Resources	Real examples of liquids other than water, such as paint, glue, juice, soda, baby oil, shampoo, and cooking oil. Real examples of solid, crayons, wooden blocks, books, etc. A large mirror and several small mirrors Visuals representing three states of water (**Worksheet 4a**) • Classroom set cut up and put in envelopes for each student • One enlarged set for teacher to use Chart (**Worksheet 4b**)

Key Elements	Lesson 4 Procedures
Engagement ● Object, event or question used to engage students. ● Connections facilitated between	**Review the Arabic Water drop song and phases of the water cycle.** T: (Leads students to sing the song with gestures) T: عندما يطير الماء، أين يطير؟ إلى فوق أم إلى تحت؟ هل ينشف الماء؟ S: نعم! T: وإلى أين يصعد الماء عندما يطير؟ إلى السماء؟ (Using TPR gestures) S: يصعد إلى السماء! T: ماذا تعمل حفنة الماء/قطرة الماء في السماء؟ (Using TPR gestures)

WATER, WATER EVERYWHERE

Key Elements	Lesson 4 Procedures
what students know and can do	S: سحاب T: هل الجو حار أم بارد عندما يسقط الثلج (Using TPR gestures) S: هو بارد! T: عندما تطل الشمس ماذا يحدث للثلج؟ هل يذوب الثلج؟ S: نعم! يذوب!
Exploration ● Objects and phenomena are explored. ● Hands-on activities, with guidance.	**Introduce three states of water** – سائل (rain or other), جامد/صلب (ice/snow), غاز T: (Showing visuals of the three states of water) هل هذا ماء؟ (Pause) نعم، هذا ماء. (Continuing with pictures of different states of water) T: (Modeling TPR gestures for جامد, سائل, and غاز, teach vocabulary for the states of the water.) T: (Pointing to a particular picture) ما هذا؟ (pause) هل هو جامد؟ هو جامد عندما يصير الماء ثلج هو جامد مثل الثلج والجليد T: (Pointing out other solids in the classroom and naming them, invites students to point out other solids in the classroom) "هذا جامد" T: (Going back to the pictures and having students point out water as a solid) T/S: جليد/ثلج T: (Pouring water from one glass to another.) هذا سائل. هل تعرفون سائل آخر؟ T: (Holding up other items, including paint, cooking oil, baby oil, shampoo, lotion, but also including some solids from the classroom) هل هذا سائل أم جامد؟ **To further illustrate water as a gas.** T: هناك ماء في الهواء، هل ترونه؟ (Blow in the air.) S: *No*. T: (Blow into your hand.) هل تحسون الماء؟ S: (Students follow the example of blowing into their hands.) نعم T: (Bring out and demonstrate with a mirror. After modeling, have students breathe on a mirror and see the water condense on the mirror.) الآن هل ترونه؟ S: نعم T: الغاز تحول إلى سائل في المرءاة لكن لم من قبل لم ترونه. هناك ماء في الهواء. T: (Post signs representing the 3 states of water on a wall of the classroom, such as a snowman for جامد, rain for سائل, and one for غاز). T: (Modeling the vocabulary and gestures, students repeat the gestures): هذا ثلج. هو جامد. (Model making an imaginary snowball and throwing it.). هذا مطر. هو سائل. (Imitate raindrops falling with the fingers, or drinking water out of a glass.) هذا غاز. لا نرى الغاز. (Model puffing air out of the mouth.) T: (Leading students to walk to posted symbols of the 3 states of water, demonstrating their understanding by using the appropriate gesture, adding the words as they become more confident.) ما هذا؟

Key Elements	Lesson 4 Procedures
	S: هو سائل/جامد/غاز
Explanation ● Students explain their understanding of concepts and processes. ● New concepts and skills are introduced as conceptual clarity and cohesion are sought.	**Students explain their understanding of the concept of the states of water** T: (Pointing to the snowman) لماذا الماء جامد؟ (pause) هو بارد جداً! هو مثلج. T: (Ask students chorally individually) لماذا الماء جامد؟ S: هو بارد جداً. هو مثلج. T: (Pointing to water coming from the faucet) هل هذا الماء جامد سائل أو غاز؟ S: هو سائل. T: That's right. It's not frozen, and we can see it.
Elaboration Activities allow students to apply concepts in contexts, and build on or extend understanding and skill.	**Students explain when water is solid, liquid or gas** T: (Displaying enlarged pictures from **Worksheet 4a**) هل هذا جامد أم سائل؟ هل نراه؟ S: (With teacher direction, students answer accordingly.) T: هل هو ماء؟ S: (With teacher direction, students answer accordingly.) T: هل هو بارد جداً؟ مثلج؟ S: هو بارد جداً! T: (Continue using picture prompts to elicit vocabulary.) Students use pictures cut from **Worksheet 4a** and organize them according to the temperature. • Depict cold, temperate, and hot on the drawings of the thermometers. Post on wall or board. • Students put pictures of states of water beneath the appropriate temperature. T: (Pointing to a thermometer) هل هو بارد جداً أم حار؟ S: (Answer accordingly.) T: (Continue with other two thermometers) T: (Showing students how to match the pictures with the thermometer) S: (Take a cut out picture and place under appropriate thermometer.) T: (Pointing to worksheet) هل هو بارد جداً؟ هل هذا جامد؟ هل هذا ثلج؟ S: (Pointing) نعم. هذا بارد. هذا ثلج/جليد.
Evaluation ● Students assess their knowledge,	**Students identify examples of the three states of water** • Cut up the 12 pictures on **Worksheet 4a** • Instruct students to glue the pictures in the 3 different groups as indicated (solid, liquid, gas) **Worksheet 4b**

Key Elements	Lesson 4 Procedures
skills and abilities. Activities permit evaluation of student development and lesson effectiveness.	• Students present findings to teacher and class.

Teacher Reflections on Lesson 4 – *Why Does Water Change?*	
What worked well?	
What did not work well?	
What would I do differently?	
Other comments or notes	

WATER, WATER EVERYWHERE

Lesson 5 - Assessment Task

الدرس الخامس- نشاط تقييمي

Lesson 5 of 5	Duration: 30 Minutes
Objectives	Students can demonstrate their understanding of the Water, Water, Everywhere Module including: • There is more water than land on earth. • Bodies of water in Maryland flow from the streams to the bay to the ocean. • Water has different states. • Water circulates from the land to the sky and back again.
Performance Assessment	Students will graphically demonstrate their understanding of water and describe their graphic using limited vocabulary and short phrases.
Vocabulary and Expressions	No new vocabulary or expressions
Materials/Resources	Globe and/or map of earth Map of Maryland **Worksheet 2a** Ice cube in zip lock bag – 1 bag per student, labeled with student names 1 transparent glass or plastic container of water Picture of Itsy Bitsy Spider on the water spout **Worksheet 5a**

Key Elements	Lesson 5 Procedures
Engagement ● Object, event or question used to engage students. ● Connections facilitated between what students know and can do	**Conduct overview of previous lesson by engaging students in hands-on experiment** T: (Showing ice cube in zip lock bag): هذا ثلج. هل هو جامد أم سائل؟ S: هو جامد. T: جيد. هو جامد. T: وإذا لم يكن جامد؟ S: هو ماء/سائل أو غاز T: صحيح! والآن لنضع أكياس الثلج على... (Preferably a sunlit window sill or shelf). كيف سيصبح إلى الثلج؟ S: …. *(*Varied responses) سيصبح ثلج/غاز/سائل T: (Taking tally on pre labeled chart or board: **ice/water/ gas.)** من يظن أن الثلج سيبقى مثل ما هو؟ هل سيصبح سائل أم غاز؟ (Students raise hands to indicate choice of answer. Teacher tallies numbers, counting out loud with the students.)

Key Elements	Lesson 5 Procedures
	T: ننتظر لنرى ماذا يصير إلى الثلج.
Exploration ● Objects and phenomena are explored. ● Hands-on activities, with guidance.	**Students demonstrate understanding bodies of water** T: (Pointing to globe or map) هذه كرة جغرافية/خريطة. نرى فيها شكل الأرض. T: (Pointing to blue/green areas) ما هذا؟ S: ماء/أرض T: (Continue questioning.) T: (Continuing) هناك ماء كثير في الأرض لكن شكله ليس دائماً ماء! عندما يكون الطقس بارد جداً يجمد الماء. ماذا نسميه عندما يجمد؟ S: ثلج/جليد T: صحيح. عندما يكون الطقس بارد يصير الماء ثلج أو جليد T: وإن كان الماء حار؟ حار جداً؟ S: بخار! T: جيد. الماء يصير بخار أو غاز عندما يكون حار جداً. T: ماذا نسمي الماء عندما يكون في هذا الزجاج؟ هل هو جامد سائل أم غاز؟ T: (Pointing to Maryland map **Worksheet 2b)** أين نسكن؟ هل نسكن في ماريلند؟ S: نعم نسكن في ماريلند T: لنرى...هل نتذكر أين يذهب الماء؟ (Start with stream and elicit oral responses.) S: من السيل إلى النهر إلى الخليج إلى البحر T: جيد! هكذا يتحرك الماء! هل أحد يستطيع أن يريني الماء في الخريطة؟ S: (Student volunteers point out stream, river, bay and ocean on map) يسير من السيل إلى النهر إلى الخليج إلى البحر T: ماذا يصير للسيول الصغيرة والأنهار عندما يكون الطقس بارد جداً جداً ويجمد؟ (With gestures) S: هناك ثلج T: وماذا يحدث عندما يكون الطقس حار؟ S: غاز T: جيد! يصير الماء غاز
Explanation ● Students explain their understanding of concepts and processes. ● New concepts and skills are introduced as conceptual clarity and cohesion are sought.	**Students explain different states of water** T: إذاً هل الماء دائماً في نفس الشكل؟ S: لا! T: ماذا نسمي أشكال الماء الثلاثة؟ (Holds up pictures of different forms of water, **Worksheet 4a**) S: جامد، سائل، غاز! T: ممتاز!
Elaboration ● Activities allow students	**Students demonstrate their understanding of the water cycle**

Key Elements	Lesson 5 Procedures
to apply concepts in contexts, and build on or extend understanding and skill.	T: (Pointing to picture of the water drop) ما هذه؟ S: حفنة ماء/قطرة ماء T: عندما طارت حفنة الماء، كيف كان شكلها عندما نزلت من السماء؟ S: مطر! T: جيد! كيف كان شكلها عندما طارت إلى السماء؟ S: كانت بخار/غاز! T: وما هو المطر؟ هل هو جامد؟ أم سائل؟ أم غاز؟ S: هو سائل T: ممتاز!
Evaluation ● Students assess their knowledge, skills and abilities. Activities permit evaluation of student development and lesson effectiveness.	**Students will match images of states of water to thermometers depicting different temperatures** T: والآن يا أحبائي....لنرى ماذا يصير للثلج! من منكم يظن أن الماء سيبقى ثلج؟ (Continue questioning with water). T: نعد من منا يظن أن الماء سيبقى ثلج؟ هيا نحضر الثلج (Teacher re-counts the numbers in the tally*).* Each student retrieves his own pre-labeled zip lock bag. T: ماذا حصل للثلج؟ هل ذاب؟ S: نعم، ذاب T: هل مازال هناك ثلج في الكيس؟ S: نعم/لا S: (Answer accordingly) T: هيا نرى حساباتنا.... من ظن أن الثلج سيذوب ويصير سائل؟ (Count with students). (Continue with numbers of those who guessed steam/gas). S: (Repeating numbers with teacher) T: من أكثر؟ الفريق الصحيح من الأصدقاء الذين قالوا أن الماء سيذوب أوالفريق الآخرمن الأصدقاء الذين قالوا أن الماء سيبقى ثلج؟ S: الفريق الصحيح! T: الفريق الصحيح أكثر! الثلج صارماء لأنه كان حار (Possible additional activity. Pour the water from the bag into a flat, shallow dish and leave it until the next day, or until later in the class. The water should evaporate. Ask, ماذا حصل للماء؟ هل صار جامد؟ لا تحول إلى غاز. هل نستطيع أن نراه؟ لا. لأنه غاز

Teacher Reflections on Lesson 5 – *Assessment Task*	
What worked well?	
What did not work well?	
What would I do differently?	
Other comments or notes	