

5th Grade FOSS: Environments

RS: Response Sheet SS: Student Sheet ST: Science Story TO: Teacher Observation FQ: Focus Question

| Session 1 | Session 2 | Session 3 | Session 4 | Session 5 |
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| <p><i>Survey/Posttest</i> * (optional)</p> <p>pgs. 1-6 of Benchmark Assessment Folio</p> <p>*not graded but coded for understanding</p> <p>SS- Parent Letter Parent Help: <u>Build run ways for Inv. 2/Part 1</u> SS-Runway Const.</p> | <p>Set Up Notebooks</p> <p>Inv. 1/Part 1 <i>Setting Up Terrariums</i></p> <p>FQ: What environmental factors affect the growth of seeds?</p> <p>SS—Terrarium Map</p> | <p>Inv. 1/Part 1 cont.</p> <p>FQ: (cont. with session 2)</p> <p>Plant terrariums</p> <p>TO—Informal Observation</p> <p>ST-Amazon Rainforest Journal</p> | <p>Inv. 1/Part 2 <i>Terrestrial Environments</i></p> <p>FQ: How does the environment in the terrarium change over time?</p> <p>ST-Terrestrial Env. Around the World</p> <p>RS- Terrestrial Environments</p> | <p>Inv. 2/Part 2 <i>Responding to Moisture Set Up</i></p> <p>FQ: How much moisture do isopods and beetles prefer?</p> <p>SS- Animal Investigations</p> <p>I-check 1 from Benchmark Assessment Folio</p> |
| Session 6 | Session 7 | Session 8 | Session 9 | Session 10 |
| <p><i>Inv. 2/Part 2 cont. Runway(moisture) observ.</i> (15 min)</p> <p><i>Inv. 1/Part 2 Terrarium Obs.</i> (10 min)</p> <p>ST- Beetles; The Darkling Beetle</p> <p>RS-Bugs & Beetles</p> | <p>Inv. 2/Part 3 <i>Responding to Light Set Up</i></p> <p>FQ: How do isopods and beetles respond to different amounts of light?</p> <p>SS- Animal Investigations</p> | <p><i>Inv. 2/Part 3 cont. Runway (light) observ.</i> (15 min)</p> <p><i>Inv. 1/Part 2 Terrarium Obs.</i> (10 min)</p> <p>ST - Isopods</p> <p>I-check 2 from Benchmark Assessment Folio</p> | <p>Inv. 2/Part 4 <i>Designing an animal investigation</i></p> <p>FQ: (Students design and write their own focus question/invest.)</p> <p>TO - Informal Observation</p> <p>SS- Animal Invest.</p> | <p>Catch up day. . .</p> |
| Session 11 | Session 12 | Session 13 | Session 14 | Session 15 |
| <p>Inv. 3/Part 1 <i>Setting up the Experiment (Observe on Sessions 16 & 18)</i></p> <p>FQ: What are the optimal water conditions for each of four plants, corn, wheat, barley and peas?</p> <p>SS - Plant Set Up</p> | <p><i>LAST Inv. 1/Part 2 Terrarium Observ (15 min.)</i></p> <p>Wrap Up</p> | <p>Inv. 4/Part 1 <i>Goldfish Aquar.</i></p> <p>FQ: What are two environmental factors to consider when setting up a goldfish aquarium?</p> <p>SS-Aquar. Log TO- Informal Assessment ST - Aquatic Environ. around the World</p> | <p>Inv. 4/Part 2 <i>Acid in Water</i></p> <p>FQ: How do living organisms affect the quality of aquatic environments?</p> <p>Note: Need a recess/break between set up & observ.</p> <p>SS- Inv. w/ BTB RS- Aquatic Environ.</p> | <p>Inv. 4/Part 3 <i>New Organisms</i></p> <p>FQ: What other organisms might live in the same environment as goldfish?</p> <p>ST- Water Pollution: The Lake Erie Story. . .</p> |

| Session 15 | Session 16 | Session 17 | Session 18 | Session 19 |
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| <p>Inv. 3/Part 2 <i>Day 5 Observe.</i> (15 min) SS – Plant Observ.</p> <p>Inv. 5/Part 1 <i>Setting up the Experiment: Brine Shrimp</i></p> <p>FQ: How can we find out if salinity has an effect on brine shrimp hatching?</p> <p>ST – Brine Shrimp</p> <p>Assessment: I-check 4 from Benchmark Assessment folio</p> | <p>Inv. 5/Part 2 <i>Determining the Range of Tolerance</i></p> <p>FQ: What is the range of salinity for hatching brine shrimp?</p> <p>What is the optimum environment for hatching brine shrimp?</p> <p>SS – Brine Shrimp Hatching</p> <p>TO- Informal Observation</p> | <p>Inv. 5/Part 2 cont. Continue to observe brine shrimp hatching.</p> <p>Assess: Written student report to Dr. Bryan.</p> <p>ST – The Mono Lake Story</p> <p>Inv. 6/Part 1 <i>Setting up the Experiment Day 1</i></p> <p>FQ: What is the salt tolerance of several common farm crops?</p> <p>SS- Plant Exp Set Up</p> | <p>Inv. 3/Part 2 <i>Day 8 Observe.</i> (15 min) SS – Plant Observ. ST – Auntie’s Plants RS- Water Tolerance</p> <p>Inv. 5/Part 3 <i>Determining Viability Set Up</i></p> <p>FQ: Will brine shrimp hatched when removed from salty environments and placed in an environment w/in their range of tolerance?</p> | <p>Inv. 5/Part 3 cont. Observe</p> <p>ST –Brine Shrimp Aquaculture</p> <p>RS – Brine Shrimp Hatching</p> |
| Session 20 | Session 21 | Session 22 | Session 23 | Session 24 |
| <p>Inv. 6/Part 2 <i>Observing Plants Day 3</i></p> <p>FQ: What changes in plants can be observed over time?</p> <p>SS- Plant Observ.</p> <p>ST – Breeding Plants</p> | | <p>Inv. 6/Part 2 <i>Observing Plants Day 5</i></p> <p>SS – Plant Profile</p> <p>ST – What happens when ecosystems change?..</p> <p>Assessment: I-check 3 from Benchmark folio</p> | <p><i>Survey/Post Test Assessment:</i> Pgs. 1-6 in Benchmark Assessment folio.</p> <p>OR</p> <p>Selected items from pgs. 7-18 in Assessment Duplication Masters</p> | <p>Clean Up</p> |

Based on 40-minute sessions; some lessons call for response sheets, student sheets and science stories that can be used during the science period or later in the day. Copying of some student sheets can be eliminated as one becomes more proficient in note booking.

Benchmark Assessment Folio is an additional folio not necessarily included in all kits at this time. Use RS- Response Sheets, notebook entries and end of module assessment for student assessment if this folio is not available.

| | SYSTEMS | INQUIRY | APPLICATION | LIFE |
|---|----------------|----------------|--------------------|-------------|
| Survey/Post test | | | | |
| Investigation 1 | | | | |
| SS - Terrarium Map | | | | |
| ST - Amazon Rainforest Journal | | | | |
| ST - Terrestrial Environ. around World | | | | |
| RS - Terrestrial Environments | | | | |
| SS- Animal Investigations | | | | |
| Notebook Entries | | | | |
| I-Check 1: | | | | |
| Investigation 2 | | | | |
| SS - Animal Investigations: Moisture | | | | |
| ST – Beetles; The Darkling Beetle | | | | |
| RS- Bugs and Beetles | | | | |
| SS – Animal Investigations : Light | | | | |
| ST—Isopods | | | | |
| I-Check 2: | | | | |
| SS - Animal Investigations: Design Own | | | | |
| Notebook entries | | | | |
| Investigation 3 | | | | |
| SS - Plant Set Up | | | | |
| SS – Plant Observations | | | | |
| SS- Plant Observations | | | | |
| ST- Auntie's Plants | | | | |
| RS- Water Tolerance | | | | |
| Notebook Entries | | | | |
| I-Check 3: | | | | |
| Investigation 4 | | | | |
| SS – Aquarium Log | | | | |
| ST—Aquatic Environ. around World | | | | |
| SS - Investigate with BTB | | | | |
| RS - Aquatic Environments | | | | |
| ST - Water Pollution: The Lake Erie Story | | | | |
| Notebook Entries | | | | |
| I-Check 4: | | | | |
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| Investigation 5 | | | | |
| SS- Brine Shrimp Hatching | | | | |
| ST - The Mono Lake Story | | | | |
| ST - Brine Shrimp Aquaculture | | | | |
| RS - Brine Shrimp Hatching | | | | |
| Notebook Entries | | | | |
| Investigation 6 | | | | |
| SS - Plant Experiment Set Up | | | | |
| SS - Plant Observation | | | | |
| ST - Breeding Plants | | | | |
| SS - Plant Profile | | | | |
| ST - What happens when ecosystems ...? | | | | |
| Notebook Entries | | | | |
| Survey/Post test | | | | |