**OIL PENETRATION LAB**

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What will happen when each substance is poured into the different kinds of sediment? Write a hypothesis, an educated guess.

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2. Explain your hypothesis. Why do you think this will happen?

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3. Describe what happened. Was your hypothesis right?

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4. Write a conclusion that explains which areas in PWS will be more sensitive.

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**TANKER LEAK LAB**

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_­­\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Your team has just received word of a tanker leaking oil in the Pacific Ocean. How will you use your resources to effectively clean up the oil and prevent it from spreading?

1) Which do you think is denser, oil or water? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2) What do you think will happen to the oil as it spills out of a tanker into the ocean?

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3) What special problems arise if an oil spill occurs in the open ocean, on a rocky coast, or near a sandy beach? (Hint: think about things like currents, surface area, and habitat for wildlife) Describe how you would deal with an oil spill in these different locations in the chart below.

|  |  |  |
| --- | --- | --- |
| Oil Spill Site | Special Problems | Possible Strategies for Cleanup |
| Open Ocean |  |  |
| Rocky Coast |  |  |
| Sandy beach |  |  |

4) What are some direct effects of oil on animals?

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5) What are some indirect effects of oil on animals?

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6) How does the timing of an oil spill affect animals?

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**SEASONAL OIL SPILL EFFECTS ON HABITAT WORKSHEET**

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What happens when oil spills during different seasons? Use the following words below to complete the sentences and find out.

**Word Bank**

**response equipment, estuaries, boom, migration, eggs, layover, vulnerable, deformed, overwintering, hatchlings, spawn, mousse**

 It is fall and school has begun. Birds are beginning their journey south, salmon are still returning to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in streams and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. If oil is spilled in this season, it will affect salmon \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and make it difficult for birds to reach their \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ site.

 Snow has fallen and the lakes are frozen. A tanker has spilled oil. A major winter storm created a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and this oil weathering has made it difficult to contain with \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ tried to trap the oil, but the water was too rough for it to work. Response efforts were ineffective.

 Snow is melting and birds are returning from the south. Herring are laying eggs in theintertidal zone on vegetation. If oil spills in this season, it could cover herring eggs, causing some of them to die or hatch \_\_\_\_\_\_\_\_\_\_\_. Salmon fry are \_\_\_\_\_\_\_\_\_\_\_\_\_ and find it difficult to find food to survive. Birds are journeying back and stopping at \_\_\_\_\_\_\_\_\_\_\_\_\_ sites. Under the oil, it's hard to find food for them to continue their \_\_\_\_\_\_\_\_\_\_\_\_\_ north.

 School is out, fishing season has begun, and flowers are blooming. If an oil spill happens now, salmon are returning to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and birds are laying their eggs. Their \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_are at risk if they are covered in oil. Salmon may have trouble finding a place to lay their eggs.