

## 'Fish, Fossils and Fuels' – Where does oil come from?

Science and Technology Es and Os	Activity Overview	Resources	Suggested Interdisciplinary Links
SCN 2-17a: Having explored the substances that make up the Earth's surface, I can compare some of their characteristics and uses.	Using readily available materials, pupils will investigate the processes involved in the formation of oil over several days.	<p>Pupil Role Cards</p> <p>Bread Fossils Experiment Record</p> <p>Book Reference: <i>Oil and Natural Gas</i>, pages 18-19</p> <p>Materials per Group:</p> <ul style="list-style-type: none"> <li>• 3 slices of bread (1 each of white, brown, seeded)</li> <li>• Soft gummy sweets</li> <li>• Heavy books</li> <li>• Paper Towels</li> <li>• Magnifying lens</li> <li>• Apple corer</li> <li>• Plastic knife</li> </ul>	<p>LIT 2-02a</p> <p>LIT 2-09a</p> <p>LIT 2-15a</p> <p>SOC 2-01a</p> <p>HWB 2-09a</p> <p>HWB 2-11a</p>

## 'It's a Gas – Natural Gas' – What is natural gas?

Science and Technology Es and Os	Activity Overview	Resources	Suggested Interdisciplinary Links
<p>SCN 1-15a: Through exploring properties and sources of materials, I can choose appropriate materials to solve practical challenges.</p> <p>SCN 2-15a: By contributing to investigations into familiar changes in substances to produce other substances, I can describe how their characteristics have changed.</p> <p>SCN 2-17a: Having explored the substances that make up the Earth's surface, I can compare some of their characteristics and uses.</p> <p>TCH 1-02a: Throughout all my learning, I take appropriate action to ensure conservation of materials and resources, considering the impact of my actions on the environment.</p>	Using readily available materials, pupils will investigate the processes involved in the formation of natural gas.	<p>Pupil Role Cards</p> <p>It's A Gas Experiment Record</p> <p>Book Reference: <i>Oil and Natural Gas</i>, pages 20-23</p> <p>Materials per Group:</p> <ul style="list-style-type: none"> <li>• 1 hard cooked egg with shell</li> <li>• 2 lettuce leaves</li> <li>• 500ml plastic bottle</li> <li>• 1 balloon</li> <li>• Measuring cylinder / jug</li> <li>• 1 funnel</li> <li>• 50g sand</li> <li>• 25ml dirty water (add soil to water)</li> <li>• Masking tape</li> <li>• Scales</li> </ul>	<p>LIT 2-05a</p> <p>LIT 2-06a</p> <p>LIT 2-09a</p> <p>MNU 2-11b</p> <p>HWB 1-09a</p> <p>HWB 2-09a</p> <p>HWB 1-11a</p> <p>HWB 2-11a</p>

## Seeping Stones – What are oil traps?

Science and Technology Es and Os	Activity Overview	Resources	Suggested Interdisciplinary Links
<p>SCN 1-15a: Through exploring properties and sources of materials, I can choose appropriate materials to solve practical challenges.</p> <p>SCN 1-20a: I have contributed to discussions of current scientific news items to help develop my awareness of science.</p> <p>SCN 2-17a: Having explored the substances that make up the Earth's surface, I can compare some of their characteristics and uses.</p> <p>TCH 1-02a: Throughout all my learning, I take appropriate action to ensure conservation of materials and resources, considering the impact of my actions on the environment.</p>	Using a collection of rocks, predict and test whether water can be absorbed by the rocks.	<p>Pupil Role Cards</p> <p>Seeping Stone Experiment Record</p> <p>Book Reference: <i>Oil and Natural Gas</i>, pages 20-23</p> <p>Materials per Group:</p> <ul style="list-style-type: none"> <li>• 5 rocks selected by groups</li> <li>• Additional samples of sedimentary rock (i.e. Limestone, sandstone, shale and granite)</li> <li>• 1 eyedropper or pipette</li> <li>• Markers</li> <li>• Water</li> <li>• Paper Towels</li> <li>• Paper for chart, table or graph</li> </ul>	<p>LIT 2-09a</p> <p>MTH 2-20b</p> <p>MTH 1-21a</p> <p>MTH 2-21a</p> <p>SOC 1-07a</p> <p>SOC 1-13a</p> <p>SOC 2-13a</p> <p>HWB 1-09a</p> <p>HWB 2-09a</p> <p>HWB 1-11a</p> <p>HWB 2-11a</p>

## 'Tower of Power' – What materials come from oil?

Science and Technology Es and Os	Activity Overview	Resources	Suggested Interdisciplinary Links
<p>SCN 1-15a: Through exploring properties and sources of materials, I can choose appropriate materials to solve practical challenges.</p> <p>SCN 2.15a: By contributing to investigations into familiar changes in substances to produce other substances, I can describe how their characteristics have changed.</p> <p>SCN 1-20a: I have contributed to discussions of current scientific news items to help develop my awareness of science.</p> <p>TCH 1-02a: Throughout all my learning, I take appropriate action to ensure conservation of materials and resources, considering the impact of my actions on the environment.</p>	<p>Using readily available materials, pupils will investigate the processes involved in the separation of crude oil.</p>	<p>Book Reference: <i>Oil and Natural Gas</i>, pages 46-47, 48-49</p> <p>Petroleum Products List</p> <p>Materials per Group:</p> <ul style="list-style-type: none"> <li>• 400ml milk</li> <li>• 100 ml vinegar</li> <li>• Saucepan</li> <li>• Wooden spoon</li> <li>• Hot plate</li> <li>• Pot holder</li> <li>• Petroleum products</li> </ul>	<p>LIT 2-09a</p> <p>LIT 2-15a</p> <p>LIT 2-26a</p> <p>EXA 1-04a</p> <p>EXA 2-04a</p> <p>SOC 2-08a</p> <p>HWB 1-09a</p> <p>HWB 2-09a</p> <p>HWB 1-11a</p> <p>HWB 2-11a</p>

## 'Give it a Lift' – How do we get the oil out?

Science and Technology Es and Os	Activity Overview	Resources	Suggested Interdisciplinary Links
<p>SCN 1-20a: I have contributed to discussions of current scientific news items to help develop my awareness of science.</p> <p>SCN 2-17a: Having explored the substances that make up the Earth's surface, I can compare some of their characteristics and uses.</p> <p>TCH 1-02a: Throughout all my learning, I take appropriate action to ensure conservation of materials and resources, considering the impact of my actions on the environment.</p> <p>TCH 1-14a/2-14a: Through discovery and imagination, I can develop and use problem solving strategies to construct models.</p>	<p>Using readily available materials pupils will investigate the engineering challenges involved in drilling to release petroleum.</p>	<p>Pupil Role Cards</p> <p>Give it a Lift Challenge Record</p> <p>Book Reference: <i>Oil and Natural Gas</i>, pages 32-35, 38,39</p> <p>Materials: (see Challenge Record for details)</p> <ul style="list-style-type: none"> <li>• Drinking straws</li> <li>• Masking tape</li> <li>• Scissors</li> <li>• 75cm string tied to weight (can be bucket or bottle filled with water) and ruler</li> <li>• Sturdy piece of cardboard with hole cut in the middle</li> <li>• Carton of chocolate milk (chocolate so it can be seen through the straw)</li> </ul>	<p>LIT 1-09a</p> <p>LIT 2-09a</p> <p>MNU 2-09a</p> <p>SOC 2-03a</p> <p>TCH 1-11b</p> <p>TCH 2-11b</p> <p>HWB 1-09a</p> <p>HWB 2-09a</p> <p>HWB 1-11a</p> <p>HWB 2-11a</p>