**Expert Pack: Homes**

Lexile Range: 360-660

|  |
| --- |
| **Topic/Subject**: Homes |
| Texts/ResourcesBooks1. *Homes Around the World* by Dona Herwick Rice
2. *What in the World Is a Green Home?*  by Oona Gaarder-Juntti
3. *Building a House* by Anthony Curran

Multimedia/Videos1. “Different Kinds of Houses”
2. “The House in the Meadow”
3. “Time Lapse of Home Constructed Start to Finish”
 |
| Rationale and Suggested Sequence for ReadingThe purpose for this text set is to get students thinking about how and why people build homes as well as the processes, people involved, materials involved, and different types of homes. The texts & multimedia resources expose students to some of the science and design aspects that go into building a house. The set also explores different homes around the world, the structure of a house, and different aspects of a home. *Homes Around the World* widens students’ perspectives of homes people live in by showing and describing houses/homes from different countries and cultures. “Different Kinds of Houses” is a video that shows pictures of houses found in different parts of the world; the video is a nice follow up to the previous text about the same topic. Students will then listen to an audio book, “The House in the Meadow.” This book shows the steps, in a simple student friendly format, of how to build a house. Following this, the students will watch “Time Lapse of Home Constructed Start to Finish” where they can see the actual different stages of house building and connect them to what they read in the previous text. Students will then read “Building a House” so they can familiarize themselves with how building a house really begins. The final piece to this text set, *What in the World Is a Green Home?,* helps build students’ understanding of different ways houses are and the features of different types of homes. |
| **The Common Core Shifts for ELA/Literacy**1. Regular practice with *complex* text and its academic language
2. Reading, writing and speaking grounded in *evidence* from text, both literary and informational
3. Building *knowledge* through content-rich nonfiction
 |
| **College and Career Readiness Anchor Standards for Reading Literary and/or Informational Texts** 1. *Read closely to determine what the text says explicitly and to make logical inferences from it*; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
2. *Determine central ideas or themes of a text* and analyze their development; summarize the key supporting details and ideas.
3. *Read and comprehend complex literary and informational texts independently and proficiently.*
 |
| Annotated Bibliography360L Homes Around the WorldAuthor: Dona Herwick RiceGenre: Informational; photographs included Length: 20 pagesSynopsis: Learn about the different places that people call home—from apartments to cottages and castles to farmhouses. Through photographs and easy to read informational text, readers are introduced to different cultures' definitions of "home."Citation: Herwick Rice, D. (2011). *Homes Around the World.* Huntington Beach, CA: Shell Educational Publishing.Recommended Student Activities: Take a Closer Look**N/A “Different Kinds of Houses”**Author: Jana ShahrourGenre: Informational Length: 4:48 minutesSynopsis: The video shows different kinds of houses and the materials they are made from, as well as homes and buildings from the past.Citation: Shahrour, J. (2012). “Different kinds of houses”[Video file]*.* Retrieved on October 11, 2014 from https://[www.youtube.com/watch?v=Y3sSOGYORjg.](http://www.youtube.com/watch?v=Y3sSOGYORjg)Recommended Student Activities: Alike and DifferentN/A “The House in the Meadow”Author: Shutta CrumGenre: video (Book read aloud)Length: 5:44Synopsis: Through this book read aloud, it shows the steps of building a house as well as the time commitment and team work it takes. Citation: Shutta, C. (2003). “The House in the Meadow”[Video file]*.* Retrieved on December 3, 2015 from <https://www.youtube.com/watch?v=2Gfv7IGXUcE>Recommended Student Activities: WonderingsN/A “Time Lapse of Home Constructed Start to Finish”Author: Weaver Companies, Inc. Genre: VideoLength: 7:23 minutes, but only view up through 4:45 to see building of exteriorSynopsis: A time lapse project of a custom home built by Weaver Homes, beginning with clearing land and pouring foundation – captured over a 6-month period.Citation: Weaver Companies, Inc. (2011). “Time lapse of home constructed from start to finish”[Video file]*.* Retrieved October 5, 2014https://[www.youtube.com/watch?v=C3iI6S7TuCA.](http://www.youtube.com/watch?v=C3iI6S7TuCA) Recommended Student Activities: Check it Off!660L “Building a House”Author: Anthony CurranGenre: BookLength: 12 pagesSynopsis: This short book gives students a look at how homes are built. Though they have different insides, the building process is about the same.Citation: Building a House. Reading A-Z. Retrieved from <https://www.raz-plus.com/books/leveled-books/book/?id=2417&lang=English>  Recommended Student Activities: Pop Quiz600L *What in the World Is a Green Home?*Author: Oona Gaarder-JunttiGenre: Informational BookLength: 24 pagesSynopsis: Explains what it means to be green, discusses how energy is used in homes, and looks at some of **the** ways **in** which people can save energy at home and help the Earth.Citation: Gaarder- Juntti, O., (2011). *What in the World Is a Green Home?* Edina, MN: ABDO Publishing Company.Recommended Student Activities: Quiz Maker |

## **Supports for Struggling Students**

By design, the **gradation of complexity** within each Expert Pack is a technique that provides struggling readers the opportunity to read more complex texts. Listed below are other measures of support that can be used when necessary.

* Provide a brief **student-friendly glossary** of some of the academic vocabulary (tier 2) and domain vocabulary (tier 3) essential to understanding the text
* Download the Wordsmyth widget to classroom computers/tablets for students to access student-friendly definitions for unknown words. <http://www.wordsmyth.net/?mode=widget>
* Provide brief **student friendly explanations** of necessary background knowledge
* Include **pictures or videos** related to the topic within and in addition to the set of resources in the pack
* Select a small number of texts to **read aloud** with some discussion about vocabulary work and background knowledge
* Provide **audio recordings** of the texts being read by a strong reader (teacher, parent, etc.)
* **Chunk the text** and provide brief questions for each chunk of text to be answered *before* students go on to the next chunk of text
* Pre-reading activities that focus on the **structure and graphic elements** of the text
* Provide **volunteer helpers** from the school community during independent reading time.
* Use Expert Packs as the **resources for Guided Reading** with a small group of students

Why Text Sets Support English Language Learners

Those acquiring English as a second language have to learn many words in English to catch up with their English-only peers. Vocabulary builds at a much quicker pace when reading a set of connected texts. Text sets are an adaptable resource perfect for building knowledge and vocabulary. Student use of text sets can vary in terms of independence or teacher supports based on the individual needs of the students in the room. Activities found within the text set resources reflect several best practices for English Language Learner instruction including:

* Providing brief, engaging texts that provide a high volume of reading on a topic.
* Providing web-based resources and/or videos that are tied to the content of the texts students are reading.
* Providing opportunities for students to learn new vocabulary through the use of student-friendly definitions in resource-specific glossaries.
* Allowing for options to reinforce newly learned vocabulary and/or content through graphic organizers.
* Providing opportunities for students to reinforce new vocabulary through multi-modal activities including written work, group discussion, viewing visual content, and reading texts that feature the vocabulary.

Teachers of ELLs may use the protocols on the following pages to provide additional support to students who are struggling to access the content within text sets because they are new to English.

ELL Text Set Protocol Grades K-2

The protocol below assumes that students will be engaged in reading text sets with the support of the teacher and/or another adult staff member. This can be done full class, or in small groups, but will likely require adult support in this grade band.

Please note that this protocol includes options for teachers. This includes the order in which various activities (steps) take place. Individual decisions should be made considering the needs of the students and the demands of the content, keeping in mind that the goal of each scaffold is to allow students to meaningfully access each text and move toward independent, knowledge-building reading.

**Step one: Build knowledge and vocabulary as you build student interest and engagement in the topic.**

Introduce students to the overall topic/content of the text set, including knowledge demands needed to engage in the content, and domain-specific vocabulary necessary for comprehension. This should be done prior to engaging with the texts themselves – time allotted to this activity should reflect student needs (anywhere from 5 minutes prior to reading, to a full day’s lesson is appropriate).

*Options for this step include:*

* Engage students in reading and discussing auxiliary texts and resources (illustrations, photographs, video clips) on the topic of the text set.
* Pre-teach a few key content-specific terms prior to students engaging with a text set. (Ideas for text-focused vocabulary instruction can be found [here](https://achievethecore.org/content/upload/Selecting%20and%20Using%20Academic%20Vocabulary%20in%20Instruction.pdf).)
* Provide a student-friendly glossary prior to reading each text, with picture support where possible.

If pairing the text set with a [Read Aloud lesson](https://achievethecore.org/category/411/ela-literacy-lessons?filter_cat=788), giving students access to the resources in the text set can help build their knowledge and vocabulary prior to engaging with the anchor or primary text, as can access to the resources alongside subsequent reads of the anchor text. The “juicy sentence” discussion is a strategy developed by Dr. Lily Wong Fillmore to help students learn to deconstruct and reconstruct sentences, and to understand how different language features contribute to meaning. Teachers should use the [juicy sentence guidance](https://achievethecore.org/page/3160/juicy-sentence-guidance) to dig deeply into a sentence or phrase within the read aloud book, to build vocabulary, deepen content knowledge, and support understanding of syntax and grammar. Juicy sentence work should not be done for the other texts in the text set, since the purpose is for students to work rapidly through a high-volume of reading to build knowledge.

**Step two: Read text orally.**

Focusing on one resource at a time, allow students to listen to a fluent read of the resource.

*Options for this step include:*

* Have the teacher model the first read of a text or resource.
* Use recordings of the text to provide additional opportunities to hear expert reading.

**Step three: Engage in group discussion about the content.**

Allow students time in partnerships or small groups to discuss the content of the resource.

*Options for this step include:*

* + Allow for discussion/conversation (in the students’ home language if possible) with a small group of students reading the same text set prior to writing orprovide heterogeneous language groupings to talk about content and discuss what students are learning.
	+ Provide opportunities to practice using newly acquired vocabulary in the context of discussion.
	+ Have students refer to the student-friendly glossary included with each passage to identify meanings for new vocabulary necessary for comprehension.

**Step four: Write about what was read.**

*Options for this step include:*

* Use the “Rolling Knowledge Journal” and/or “Rolling Vocabulary Journal” as a shared writing routine.
* Have students complete the “Rolling Knowledge Journal” and/or “Rolling Vocabulary Journal” as independent graphic organizers that help to scaffold the writing process and capture student knowledge over time. Encourage students to use a combination of writing and drawing.
* Provide students with several supports to help students engage in writing/drawing about what they read:
	+ Use mentor texts about which students can pattern their writing.
	+ Allow them to write collaboratively.
	+ Show students visual resources as prompts, etc.
	+ Provide language supports such as strategically chosen sentence starters.

**Repeat steps one through four with each resource in the text set as appropriate.**

ELL Text Set Protocol Grades 3-12

The goal of text sets is to help students build knowledge through a volume of independent reading, and it is important that educators provide scaffolds to allow English Language Learners to be successful in engaging meaningfully with the texts, even as students are still developing English language skills. The protocol below can be used for teaching with text set resources as a full class. Students can also be trained on the protocol so that they can utilize text sets in small groups or partnerships as a resource for independent or reciprocal reading and study.

Please note that this protocol includes options for teachers. Individual decisions should be made considering the needs of the students and the demands of the content, keeping in mind that the goal of each scaffold is to allow students to meaningfully access the text and move toward independent, knowledge-building reading.

**Step one: Build knowledge and vocabulary.**

Introduce students to the overall topic/content of the text set, including knowledge demands needed to engage in the content, and domain-specific vocabulary necessary for comprehension. This should be done prior to engaging with the texts themselves; time allotted to this activity should reflect student needs (anywhere from 5 minutes prior to reading, to a full day’s lesson is appropriate).

*Options for this step include:*

* Engage students in reading and discussing auxiliary texts (of lesser complexity) and resources (illustrations, photographs, video clips) on the topic of the text set.
* Pre-teach a few key content-specific terms prior to students engaging with a text set. (Ideas for text-focused vocabulary instruction can be found [here](https://achievethecore.org/content/upload/Selecting%20and%20Using%20Academic%20Vocabulary%20in%20Instruction.pdf).)
* Provide the student-friendly glossary included in the text set prior to reading each text.
* When possible, allow students to read texts in their home language about the topic under study.

**Step two: Read text orally.**

Focusing on one resource at a time, allow students to listen to a fluent read of the resource, while following along with their own copy of the text.

*Options for this step include:*

* Have a fluent reader model the first read of a text or resource.
* Have students engage in a buddy/partner read.
* Use recordings of the text to provide additional opportunities to hear expert reading.

**Step three: Engage in group discussion about the content.**

Allow students time in partnerships or small groups to discuss the content of the resource.

*Options for this step include:*

* + Allow for discussion/conversation (in the students’ home language if possible) with a small group of students reading the same text set prior to writing or provide heterogeneous language groupings to talk about content and discuss what students are learning.
	+ Have students refer to the student-friendly glossary included with each text set to identify meanings for new vocabulary necessary for comprehension.

**Step four: Write about what was read.**

*Options for this step include:*

* Use the “Rolling Knowledge Journal” and/or “Rolling Vocabulary Journal” as a shared writing routine/ graphic organizer to help to scaffold the writing process and capture student knowledge over time.
* Provide students with several supports to help students engage in writing/drawing about what they read:
	+ Use mentor texts about which students can pattern their writing.
	+ Allow them to write collaboratively.
	+ Show students visual resources as prompts, etc.
	+ Provide language supports such as strategically chosen sentence starters.

**Repeat steps one through four with each resource in the text set as appropriate.**

**Expert Pack**: **Building a House**

**Learning Worth Remembering**

**Cumulative Activities** – The following activities should be completed and updated after reading each resource in the set. The purpose of these activities is to capture knowledge building from one resource to the next, and to provide a holistic snapshot of central ideas of the content covered in the expert pack. *It is recommended that students are* ***required*** *to complete one of the Cumulative Activities (Rolling Knowledge Journal or Rolling Vocabulary) for this Expert Pack.*

### Rolling Knowledge Journal

* + Read each selection in the set, one at a time.
	+ After you read *each* resource, stop and think what the big learning was. What did you learn that was new *and important* about the topic from *this* resource? Write, draw, or list what you learned from the text about (topic).
	+ Then write, draw, or list how this new resource added to what you learned from the last resource(s).

### Sample Student Response

|  |  |
| --- | --- |
| **Title** | **Write, Draw, or List** |
|  | **New and important learning about the topic** | **How does this resource add to what I learned already?** |
| 1. *Homes Around the World* | All over the world, people live in different kinds of homes. The types of home people live in is determined by people’s needs and the surrounding environment. |  |
| 2. *“Different Kinds of Houses”* | Some homes from the past are different than homes now. | Homes all over the world are made from many different materials. |
| 3. “The House in the  *Meadow”* | There are many steps to build a house different people that are involved (electrician, inspector, apprentices, carpenter) | Along with the different materials there are many different people that are hired to help with those materials. |
| 4. “*Time Lapse of Home Constructed Start to Finish”* | This resource shows an actual house being built. | There are the different people working on the different parts of the house using the different materials. |
| 5. *“Building a House”* | Students learn what goes into building a house. Students will read about how foundations, floors, walls and roofs make a house complete. | What goes into making a house, they might look different on the outside but have the same idea when building it. |
| 6. “*What in the World Is a Green Home?”* | Having a green home means that the materials in the home are used to keep the earth healthy. The materials that are used are natural resources.  | The different features in a green home (materials/resources) can be used/made to support saving our Earth.  |

1. **Rolling Vocabulary:**
* Read each resource then determine the 6 words from each text that most exemplify the central idea of the text.
* Next use your 6 words to write about the most important idea of the text. You should have as many sentences as you do words.
* Continue this activity with EACH selection in the Expert Pack.
* After reading all the selections in the Expert Pack, go back and review your words.
* Now select six words from ALL the word lists.
* Use the six words to summarize the most important learning from this Expert Pack.

|  |  |
| --- | --- |
| **Title** | **Six Vocabulary Words & Sentences** |
| “Homes Around the World” | Words: buildings, travel, leaves, adobe, world, yurt1. There are many types of buildings.
2. Motor homes are on wheels so when people are ready to travel they just pack up and go.
3. Homes that are in warm, rainy places have roofs made of leaves.
4. An adobe home is made from a kind of clay.
5. When you take a tour around the world you will see different kinds of homes.
6. A yurt is a home that you can take with you when you move.
 |
| “Different Kinds of Houses” | Words: materials, modern, mud, past, stones, wood1. Houses can be made from lots of different materials.
2. Modern houses are built right now.
3. In some places, mud is used to build houses.
4. Homes in the past were different than they are now.
5. Building a house with stones makes it very sturdy.
6. A lot of houses are built with wood.
 |
| “The House in the Meadow” | Words: dig, concrete, drill, hammered, plumb, house1. People have to dig a hole to start building a house.
2. After there is a hole, concrete is placed to hold the house.
3. The construction workers drill holes in boards.
4. To put two boards together, you have to hammer in a nail.
5. A house needs plumbing for the pipes.
6. When you put all the pieces together you build a house.
 |
| “Time Lapse of Home Constructed Start to Finish” | *\*\*Teacher note: There is no text in this video; words are pulled from video title.*Words: constructed, time lapse1. We constructed a snow fort out of buckets of snow.
2. Taking time lapse pictures is a fun way to show something that takes a long time to happen.
 |
| “Building a House” | Words: foundation, switches, wires, pipes, ceiling, builders1. Every house needs a strong foundation to build from.
2. A switch can turn on the light in a room.
3. Wires in a house bring electricity in a house, like lights.
4. Round pipes bring water into a house.
5. Some ceilings are very high and some are low.
6. Builders help make houses.
 |
| “What in the World Is a Green Home?” | Words: green, energy, resources, rooms, recycle, reuse1. Being green means to take care of the Earth.
2. Homes use a lot of energy to run, including electricity and power.
3. There are many ways to save resources by having a green lifestyle.
4. A house can have many different rooms.
5. You can recycle by saving cans and aluminum.
6. If you aren’t using your toys you can give them to someone else to reuse.
 |
| **Sensational Six** | Words: builder, house, rooms, home, materials, designA **builder** makes a plan for a new **house** when it needs to be built. The house is made from different **materials** including wood, concrete, metal and other creative materials. Each **room** in the house has its own unique **design** and décor. No matter where you live or what your house is made of, the people in it that you love make it feel like **home**. |

**Student Copy**

**1. Rolling Knowledge Journal**

* Read each selection in the set, one at a time.
* After you read *each* resource, stop and think what the big learning was. What did you learn that was new *and important* about the topic from *this* resource? Write, draw, or list what you learned from the text.
* Then write, draw, or list how this new resource added to what you learned from the last resource(s).

**Sample Response**

|  |  |
| --- | --- |
| **Title** | **Write, Draw, or List** |
| **New and important learning about the topic** | **How does this resource add to what I learned already?** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

**2. Rolling Vocabulary: “Sensational Six”**

* Read each resource then determine the 6 words from each text that most exemplify the central idea of the text.
* Next use your 6 words to write about the most important idea of the text. You should have as many sentences as you do words.
* Continue this activity with EACH selection in the Expert Pack.
* After reading all the selections in the Expert Pack, go back and review your words.
* Now select the “Sensational Six” words from ALL the word lists.
* Use the “Sensational Six” words to summarize the most important learning from this Expert Pack.

**Sample Response**

|  |  |
| --- | --- |
| **Title:** | **Six Vocabulary Words & Sentences** |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| **Sensational Six** | Words:  |

**Learning Worth Remembering**

**Singular Activities** – the following activities can be assigned for each resource in the set. The purpose of these activities is to check for understanding, capture knowledge gained, and provide a variety of ways for students to interact with each individual resource. Students may complete some or none of the suggested singular activities for each text. Singular activities should be assigned at the discretion of the teacher.

1. **Take a Closer Look** (Recommended for *Homes Around the World*)

Choose a home from the book and answer the following questions.

* + Who lives in this type of home?
	+ What environment is the home built in?
	+ What material(s) is the home made from?
	+ Does the home move? If so how?
	+ List two reasons people build this kind of home.
	+ Draw a picture.
1. **Alike and Different** (Recommended for “Different Kinds of Houses”)

After watching the video, list 3 ways the houses shown are the same, and then list 3 ways they are different.

|  |  |
| --- | --- |
| **Alike** | **Different** |
|  |  |
|  |  |
|  |  |

1. **Check It Off!** (Recommended for “Time Lapse of Home Constructed Start to Finish”)

Some of the different steps for building a house are listed below. Read each step to make sure you understand it. If you don’t know what some of the steps are, look back at *How a House is Built*. Then watch the video, and make a check mark (!) on the line by each step as you see it happen in the video—don’t worry about the steps being out of order. If you miss some steps, watch the video again. After you have found all of the steps, label them in order from number 1 to 7.

 framing the walls of the house

 digging the foundation and pouring concrete

 laying plywood for the first floor of the house

 framing the roof of the house

 putting stone on the front of the house

 laying plywood for the second story of the house

 putting shingles on the roof

1. **Quiz Maker** (Recommended for: *What in the World is a Green Home?*)
	* Make a list of # questions that would make sure another student understood the information.
	* Your classmates should be able to find the answer to the question from the resource.
	* Include answers for each question.
	* Include the where you can find the answer in the resource.

|  |  |
| --- | --- |
| **Question** | **Answer** |
|  |  |
|  |  |

1. **Wonderings** (Recommended for “The House in the Meadow”)

|  |  |
| --- | --- |
| I’m a little confused about: | This made me wonder: |
| On the left, track things you don’t understand from the video and the article. **I am confused about or do not understand….** | On the right side, list some things you still wonder (or wonder now) about this topic.**I wonder or would like to learn more about….** |

1. **Pop Quiz** (Recommended for “Building a House”)

Answer the following questions. *An example is given for you.*

|  |  |
| --- | --- |
| **Question** | **Possible Answer** |
| What does a building begin with? | A plan or design |
|  |  |
|  |  |

**Expert Pack: Building a House**

Expert Pack Glossary

***Homes Around the World***

|  |  |
| --- | --- |
| *Word* | *Student-Friendly Definition* |
| adobe | Type of clay made from a mixture of mud and straw that is dried by the sun.  |
| apartment | Rented room or set of rooms that is part of a building and is used as a place to live.  |
| castle | Large building usually with high, thick walls and towers that was built in the past to protect against attack. |
| clay | Heavy, sticky material from the earth that is made into different shapes and becomes hard when it is baked or dried.  |
| cottage | Small house in the country.  |
| farmhouse | House on a farm. |
| home | The place where a person lives.  |
| hut | Small and simple house or building; can be made of mud or sticks.  |
| mobile home | House that is built in a factory and then moved to the place where people will live in it.  |
| tent | Portable shelter that is used outdoors. |
| yurt | Portable bent dwelling structure used as a home. |

**“Different Kinds of Houses”**

|  |  |
| --- | --- |
| *Word* | *Student-Friendly Definition* |
| materials | Things that you can use to make or build or do something. |
| modern | Close to the present time, right now.  |
| past | Refers to a time before now, or long ago. |

 **“*The House in the Meadow”***

|  |  |
| --- | --- |
| *Word* | *Student-Friendly Definition* |
| meadow | A field where grass or alfalfa are grown to be made into hay.  |
| backhoe | An excavator whose shovel bucket is attached to a hinged boom and is drawn backward to move earth.  |
| concrete | A strong hard building material composed of sand and gravel and cement and water.  |
| carpenter | A woodworker who makes or repairs wooden objects. |
| shingles | Material placed on the roof of a house.  |
| apprentice | Works for an expert to learn a job.  |
| electrician | A person who installs or repairs electrical or telephone lines.  |
| inspector | One who examines a house or building before allowing it to be used.  |

***Time Lapse of Home Constructed Start to Finish***

|  |  |
| --- | --- |
| *Word* | *Student-Friendly Definition* |
| time lapse | Time lapse is a way of filming something where many pictures are taken over a long period of time and then are shown quickly so that something slow looks like it’s happening really fast.  |

***Building a House***

|  |  |
| --- | --- |
| *Word* | *Student-Friendly Definition* |
| builders | Someone who builds things. |
| ceiling | The top of the inside of a house or building. |
| foundation | The base of a house or building that is built on. |
| pipes | A tube that brings in water to a house. |
| switches | A device that can turn on a light or machine. |
| wires | A line of metal that keeps electricity flowing. |

***What in the World Is A Green Home?***

|  |  |
| --- | --- |
| *Word* | *Student-Friendly Definition* |
| compost | A mixture of materials, such as food scraps and lawn clippings that can be turned into fertilizer over time. |
| drapes | Heavy cloth hung over a window; curtain. |
| draft | A stream of cold air. |
| filter | To clean a liquid by passing it through a device that removes any matter floating in it. |
| device | A piece of equipment that has a certain job.  |

All content linked to within this resource was free for use when this resource was published in March 2018. Over time, the organizations that manage that external content may move or remove it or change the permissions. If the content is no longer available, please email info@studentsachieve.net.