**Expert Pack:** Unwanted Guests

Submitted by: Clark County School District

Grade: 6-8 Date: June 2015

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| **Topic/Subject**  Unwanted Guests |
| **Texts/Resources**  Article(s)   1. **“Don’t Let a Tick Make You Sick”** (730L) <https://www.cdc.gov/lyme/resources/toolkit/final_lymediseasecrossword_apr2010.pdf> 2. **Yes, there’s really a National Parasite Collection, and it’s getting a new life at the Smithsonian**(1080L) <https://www.washingtonpost.com/local/yes-theres-really-a-national-parasite-collection-and-its-getting-a-new-life-at-the-smithsonian/2016/03/19/136541da-e16b-11e5-846c-10191d1fc4ec_story.html?utm_term=.807d05b77ab2> 3. **Collapsing Honey Bee Colonies: Blame the Parasites?** (1090L) <http://www.npr.org/2012/01/07/144829259/collapsing-honey-bee-colonies-blame-the-parasites> 4. **A Tiny Jellyfish Relative Just Shut Down Yellowstone River** (1190L) <https://www.theatlantic.com/science/archive/2016/08/the-parasite-that-just-shut-down-a-montana-river-has-an-unbelievable-origin/496817/>     Each expert pack contains a variety of selections grouped to create as coherent and gradual a learning process for students as possible, generally beginning with lower levels as measured by quantitative and qualitative measures, and moving to more complex levels in the latter selections. This gradated approach helps support students’ ability to read the next selection and to become ‘experts’ on the topic they are reading about.  *Refer to annotated bibliography on the following pages for the suggested sequence of readings.* |
| **Rationale and suggested sequence for reading:**  The first text, ***Don’t Let a Tick Make You Sick****,* students are introduced to a common and well know parasite, the tick. Students learn what a tick is, where they live, how they attach themselves and what to do if they find one on them. In the next text, ***Yes, there’s really a National Parasite Collection, and it’s getting a new life at the Smithsonian***, students dig deeper into the world of unwanted guest as they learn what a parasite is and about a collection of them that the Smithsonian has acquired. They learn about parasites that are harmless and about some that are harmful or deadly. ***Collapsing Honey Bee Colonies: Blame the Parasites,*** explains how a parasite can choose a host and consequently wipe out colonies of bees. This article helps students understand how a seemingly harmless parasite can affect an essential insect and in turn ultimately affect food production. Lastly, ***A Tiny Jellyfish Relative Just Shut Down Yellowstone River*** builds on the idea that parasites can wipe out a whole species, but before it does, humans can take action. Sometimes this action can have an effect on the economics of tourism. |
| **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*   Though use of these expert packs will enhance student proficiency with most or all of the Common Core Standards, they focus primarily on Shift 3, and the highlighted portions of the standards below. |
| **College and Career Readiness Anchor Standards for Reading Literary and/or Informational Texts** *(the darkened sections of the standards are the focus of the Expert Pack learning for students)***:**   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 Bibliography**

and suggested sequence for reading

**730L “Don’t Let a Tick Make You Sick”**

Author: Center for Disease Control and Prevention

Genre: Informational Poster

Length: 253 words

Synopsis: Explains what a tick is, where to find them, how they bite people and what to do when they bite you.

Citation: Cdc. "Don't Let a Tick Make You Sick." *Don't Let a Tick Make You Sick* (n.d.): n. pag. Web.

Cost/Access: $0.00 / <https://www.cdc.gov/lyme/resources/toolkit/final_lymediseasecrossword_apr2010.pdf>

Recommended Student Activities: PopQuiz

**1080L Yes, there’s really a National Parasite Collection, and it’s getting a new life at the Smithsonian (page 1 and page 3)**

Author:  [Michael E. Ruane](https://www.washingtonpost.com/people/michael-e-ruane/)

Genre: Informational

Length: 561 words

Synopsis: The United States Government has been collecting parasites for a hundred years because they are priority to the research related to our well-being. This article explains how research has helped us understand that some parasites can live on our bodies and cause infectious diseases as well as the use of parasites for medical treatments.

Citation: Ruane, Michael E., The Washington Post, March 2016, retrieved from The Washington Post, March 2016.

Cost/Access: $0.00/ ) [https://www.washingtonpost.com/local/yes-theres-really-a-national-parasite- collection-and-its-getting-a-new-life-at-the-smithsonian/2016/03/19/136541da-e16b-11e5-846c- 10191d1fc4ec\_story.html?utm\_term=.807d05b77ab2](https://www.washingtonpost.com/local/yes-theres-really-a-national-parasite-%09collection-and-its-getting-a-new-life-at-the-smithsonian/2016/03/19/136541da-e16b-11e5-846c-%0910191d1fc4ec_story.html?utm_term=.807d05b77ab2)

Recommended Student Activities: Wonderings

**1090L Collapsing Honey Bee Colonies: Blame the Parasites?**

Author: npr

Genre: Interview transcript

Length: 589 words

Synopsis:

Citation: Collapsing Honey Bee Colonies: Blame the Parasites, transcript from npr, January 7, 2012, 8:00 am, heard on Weekend Edition Saturday.

Cost/Access: $0.00/[http://www.npr.org/2012/01/07/144829259/collapsing-honey-bee-colonies-blame-the- parasites](http://www.npr.org/2012/01/07/144829259/collapsing-honey-bee-colonies-blame-the-parasites)

Recommended Student Activities: Picture of Knowledge

**1190L**  **A Tiny Jellyfish Relative Just Shut Down Yellowstone River**

Author: Ed Young

Genre: Non-Fiction Article

Length: 585 words

Synopsis: Mountain whitefish are dying in the Yellowstone River and a highly contagious parasite is to blame. Humans are spreading this parasite from one body of water to another. For this reason, officials have decided to close down recreation activities on the Yellowstone River to stop the spread of this parasite.

Citation: The Atlantic. Atlantic Media Company, n.d. Web. 08 Feb. 2017

Cost/Access: $0.00 <https://www.theatlantic.com/science/archive/2016/08/the-parasite-that-just-shut-down-a-montana-river-has-an-unbelievable-origin/496817/>

Recommended Student Activities: Wonderings

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.

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**Text Complexity Guide**

Title: Collapsing Honey Bee Colonies: Blame the Parasites?

1. **Quantitative Measure**

Go to <http://www.lexile.com/> and enter the title of the text in the Quick Book Search in the upper right of home page. Most texts will have a Lexile measure in this database. You can also copy and paste a selection of text using the Lexile analyzer.

2-3 band 420 -820L

4-5 band 740 -1010L

6-8 band 925 - 1185L

9 -10 band 1050 – 1335L

11 – CCR 1185 - 1385

\_\_\_ 1090L\_\_\_

1. **Qualitative Features**

Consider the four dimensions of text complexity below. For each dimension\*, note specific examples from the text that make it more or less complex.

It is written as a transcript, as if two people were talking to each other. Each time a person talks their name appears first. There are generally questions posed by the interviewer or host and then answers by the person being interviewed.

Students will need to understand that this is a transcript of an actual interview and is a dialogue between two people. Andrew Core, the author of a study is being interviewed to explain his findings.

**Meaning/Purpose**

**Structure**

**Language**

**Knowledge Demands**

Students may need to know about the importance of honeybees in nature. It is critical to know what the relationship is between honeybees and pollination in order for students to realize the impact these parasites have on this process and the natural implications.

The text is conversational. It can be difficult to follow someone’s line of thinking as they are talking. Sometimes the dialogue consists of several phrases separated by commas. There are rather lengthy sentences. Vocabulary is dense as well.

1. **Reader and Task Considerations**

*Students may need to actually read this using two people; one to act as the host and one to act as the one being interviewed. It will be easier to keep track of who is speaking. You can also have them listen to the actual interview before they read it. Having them hear it first will help students read it.*

**Expert Pack:** Unwanted Guests

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Grade: 6-8 Date: June 2015

**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.*

1. **Rolling Knowledge Journal**
2. Read each selection in the set, one at a time.
3. 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).
4. Then write, draw, or list how this new resource added to what you learned from the last resource(s).

**Sample Student Response**

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| **Title** | **Write, Draw, or List** | |
|  | **New and important learning about the topic** | **How does this resource add to what I learned already?** |
| 1. **“Don’t Let a Tick Make You Sick?**” | Ticks attach themselves to your skin and burrow under it to suck your blood. | This is a kind of parasite that can make you really sick. |
| 1. **“Yes, there’s really a National Parasite Collection, and it’s getting a new life at the Smithsonian”** | There is a collection of parasites that is being moved to a new location and reorganized so scientists can continue to study them. It’s the biggest in the world. Some can be found inside the host and some are found outside the host. Some parasites cause great harm to the host and some are harmless. | The tick is an external parasite and is one of the ones that can cause great harm and make you really sick. |
| 1. **“Collapsing Honey Bee Colonies: Blame the Parasites?”** | There is a parasite fly that lays its eggs inside the abdomen of a honeybee and causes it to act vey strange.  If it infects the whole hive then the hive could die. | It explains how a parasite can affect animals and then it can affect humans because if the honeybees die then we don’t have an insect that can pollinate plants in the same way. |
| 1. **A Tiny Jellyfish Relative Just Shut Down Yellowstone River** | Tiny microscopic parasites infect rainbow trout and freshwater fish. It makes them swim in circles so they can’t escape their predators. The dead fish release seed-shaped spores that lay dormant until swallowed by worms. Worms poop a new parasite that grows from the spores into the water. They attach themselves to fish swimming by and infect them.  Yellowstone River was closed to all recreation because it was found that humans can spread the parasite from one body of water to another. | Transporting parasites from one body of water to another can help spread a disease fast and potentially wipe out whole species. Limiting recreational activities may be an inconvenience it is necessary to save animals. |

1. **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.

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| **Title** | **Sensational Six Vocabulary Words & Sentences** |
| **“Don’t let a Tick Make You Sick?**” | **Words: related, stages, mistake, attach, tweezers, disinfectant**  **Sentences:**   1. The tick and the spider are **related.** 2. There are many **stages** to a tick’s life. 3. Some people **mistake** ticks for freckles. 4. Ticks **attach** themselves to people and animals in hard to find places. 5. To remove a tick you need to have **tweezers** to pinch them with. 6. You should use a **disinfectant** to wash the bite so it doesn’t get infected. |
| **“Yes, there’s really a National Parasite Collection, and it’s getting a new life at the Smithsonian”** | **Words: specimen, parasite, external, internal, tapeworm, plague**   1. Many **specimens** were collected and put into jars. 2. The jars were filled with **parasites.** 3. A flea is an example of an **external** parasite. 4. **Internal** parasites live inside their host. 5. The **tapeworm** is an example of an internal parasite. 6. Parasites continue to **plague** both humans and animals. |
| **“Collapsing Honey Bee Colonies: Blame the Parasites?”** | **Words: invade, disoriented, vial, disperse, remedy, collapse**   1. Enemy insects can **invade** hives. 2. Bees can get **disoriented** and not know where they are. 3. The scientist kept the fleas in a **vial**. 4. When it is light outside, honeybees **disperse** and go looking for food. 5. The doctor tried to find a **remedy** for his illness. 6. If too many bees get infected then the hive could **collapse.** |
| **“A Tiny Jellyfish Relative Just Shut Down Yellowstone River”** | **Words: proliferative, contagious, transform, deformity, reactivate, deploy**   1. Scientists discovered the fish had **proliferative** kidney disease. 2. A highly **contagious** parasite infected many fish. 3. They seemed to **transform** into a parasite. 4. The parasite caused a **deformity** in the fish’s body that made it swim in circles. 5. The parasite was **reactivated** once the worm swallowed it. 6. Tiny eggs were **deployed** to get ready to hatch inside the host. |
| **Sensational Six: related, attach, parasite, external, internal, invade**  **Summary:** There are many different types of **parasites** that can **invade** a body. **External** parasites **attach** themselves to the outside of a body. **Internal** parasites live inside a body. Both kinds are **related** because they could both make you very sick and they can both affect people in many ways without making them sick. | |

**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 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. **Pop Quiz** (Recommended for “Don’t Let a Tick Make You Sick”)

Answer the following questions.

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| **Question** | **Possible Answer** |
| 1. What animal are ticks related to? | spiders |
| 1. Why do tick get mistaken for freckles or dirt? | Because they are very tiny and sometimes hard to see. |
| 1. Where do ticks live? | In tall grass, shrubs, and leaves |
| 1. How do they attach themselves to you? | They grab onto you as you walk by and then bit into your skin to drink your blood. |
| 1. How do you get them off of you? | Use tweezers to pinch them and pull them off. |

**Wonderings**  (Recommended for “Yes, there’s really a National Parasite Collection, and it’s getting a new life at the Smithsonian”, “A Tiny Jellyfish Relative Just Shut Down Yellowstone River”)

On the left, track things you don’t understand from the article as you read.

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| I’m a little confused about: | This made me wonder: |
|  |  |

On the right side, list some things you still wonder (or wonder now) about this *topic*

1. **A Picture of Knowledge** (Recommended for “Collapsing Honeybee Colonies: Blame the Parasites?”)

* Take a piece of paper and fold it two times: once across and once top to bottom so that it is divided into 4 quadrants.
* Draw these shapes in the corner of each quadrant.

1. Square
2. Triangle
3. Circle
4. Question Mark

**?**

1. Write!

Square: What one thing did you read that was interesting to you?

Triangle: What one thing did you read that taught you something new?

Circle: What did you read that made you want to learn more?

Question Mark: What is still confusing to you? What do you still wonder about?

* Find at least one classmate who has read [selection] and talk to each other about what you put in each quadrant.

**Possible Responses;**

Square: That the infected bees act like zombies.

Triangle: The flies lay their eggs inside the honeybee’s abdomen and make them sick.

Circle: How the scientists are trying to figure out a solution to the problem.

Question Mark? I wonder what would happen if they don’t find a solution and all the hives collapse, leaving no more honeybees.

**Expert Pack:** Unwanted Guests

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Expert Pack Glossary

**Don’t Let a Tick Make You Sick**

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| *Word* | *Student-Friendly Definition* |
| related | To have a connection with something.  *The two boys were related.* |
| stages | One step in a process of growing or making something.  *The skyscraper is still in an early stage of construction.* |
| disinfectant | Something that kills germs.  *This bathroom cleanser contains a disinfectant.* |

**“Yes, there’s really a National Parasite Collection, and it’s getting a new life at the Smithsonian”**

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| --- | --- |
| *Word* | *Student-Friendly Definition* |
| parasite | A plant, animal, or fungus that lives on or in another living thing, called the host. A parasite gets its food and energy from the host organism.  *Several diseases are caused by parasites that live in the intestine.* |
| specimen | A small amount of matter or liquid used for testing.  *Scientists can study a specimen to look for causes of illness.* |
| catastrophic | Disastrous, causing great ruin.  *Damage to specimens would be a catastrophic problem.* |
| internal | Located on the inside.  *The heart is an internal organ.* |
| tapeworm | Any of various flatworms that live as parasites in the intestines of humans and other vertebrates.  *Inside the dolphin they found many tapeworms.* |
| plague | To bother or annoy.  *She plagued her older sister with questions.* |

**“Collapsing Honey Bee Colonies: Blame the Parasites?”**

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| --- | --- |
| *Word* | *Student-Friendly Definition* |
| invade | To disturb or break into without being asked or wanted; intrude on; violate.  *He invaded her privacy by walking into the room without knocking.* |
| larvae | An insect after it hatches from the egg and before it changes into its adult form. |
| vial | A small, sometimes stoppered bottle of glass or plastic used for small amounts of liquid medicine, chemicals, perfume, or the like.  *They kept the specimen in a vial.* |
| disperse | To drive away in all directions; scatter.  *A gunshot dispersed the flock of geese.* |
| remedy | Something used to take away pain or cure an illness.  *My grandmother had a good remedy for an earache.* |

**“A Tiny Jellyfish Relative Just Shut Down Yellowstone River”**

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| --- | --- |
| *Word* | *Student- Friendly Definition* |
| proliferative | To multiply or grow quickly. Spread quickly. |
| Devastated | Caused challenges or harm |
| deformity | To damage the shape or form of something. |
| reactivate | To make active again. |
| spores | A tiny reproductive body made up of one or more cells. |
| deploy | To move, position, or distribute in order to do a job. |