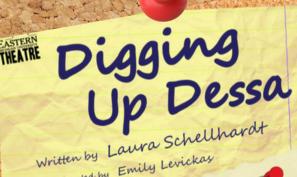
Digging Up Dessa STUDY GUIDE



FOR TICKETS

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Directed by Emily Levickas



the seaso

Table of Contents

Mary Anning

Theatre Etiquette Digging Up Dessa Synopsis Why This Play Now? Q & A with Director About the Playwright Meet the Cast & Rehearsal Photos What is Paleontology? Mary Anning Women in Science **Classroom Activities** Glossary of Terms- Digging Up Dessa

Theatre Etiquette

Thank you for coming to see Eastern Michigan University's production of *Digging up Dessa*! Before the show, we have a few rules you need to follow in order to make the experience enjoyable for all.

- No talking during the show. It's okay to react to what you are watching (you can laugh, gasp, etc.), but we would appreciate it if you avoided all sideline conversations.
- No phones allowed. During the play, please keep your phone on silent, or turn it off completely, as the light from the screen can be very distracting.
- Stay in your seats during performances. If you need to get up and leave to go to the restroom, for example, please be swift and quiet leaving and returning.
- No food is allowed in the auditorium because it can stain the seats and distract other audience members.

Enjoy the Show!

LEGACY - SPONBERG THEATRE



RATING

Eastern Michigan University

ichael H. Jones Natatorium

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E Circle Dr

Wise Hall

Best Hall

St Johns St

Digging up Dessa Synopsis

Dessa is a 21st-century girl with no shortage of struggles, secrets and mysteries to solve. But in the aftermath of her father's death, this smart, funny, young scientist struggles to overcome her grief and anger at all the changes in her world. From dinosaur bones to hidden memories, the world is filled with buried treasures just waiting to be uncovered. Luckily, thanks to the mysterious appearance of a remarkable friend—the pioneering 19th-century English paleontologist Mary Anning—young Dessa knows just how to excavate them! After a field trip to a museum reveals that Mary Anning's legacy has been buried by history because of her gender and lack of formal education, Dessa decides that she's going to fight to earn her friend the credit she deserves. With help from her once-rival, Nilo, Dessa sets to work unearthing the secrets hidden beneath the surface of the past and present—for Mary's history and her own future.

Character Descriptions

Dessa: 12 year old girl who loves hunting fossils, trying to cope with the loss of her father and her own trauma from a car accident.

Nilo: 13 year old boy, is popular at Dessa's school, has a big heart underneath

Esther: Dessa's mother, writes and sings jingles for an ad agency. But her real dream is to be a singer.

Mary Anning: British Paleontologist from the 19th century. Dessa's voice of reason, and comforter. Dessa is the only one who can see and hear her.

Why This Play Now?

Digging up Dessa is an inspiring story for anyone who has had a dream and was told they could not achieve it because of gender. Middle school is one of the most challenging times in a kid's life; they are exploring and figuring out who they want to be. This play is important because it shows young women they can do anything they put their minds to, and use their voices to stand up for what they believe in. Throughout history, women have been overlooked and not credited for their contributions to society. Real-life paleontologist Mary Anning discovered many dinosaur fossils, and did not get credit for her discoveries. Dessa is the perfect role model for girls because she aimed to change the systems ruled by men.

Content

Disclosure:

grief, loss. mention of suicide



Q and A with Director Emily Levickas

What about the play Digging up Dessa inspired you to direct a production of it?

It is not often that I run into a script (especially a script for young audiences) that centers on women. I love that not only is the main character (Dessa) a young aspiring scientist, but we also get to know her artist mother (Esther) and mentor (Mary Anning). I'm inspired by all of them and am honored to be a part of sharing this story. Reading the script made me reflect on my relationship with the important women in my life. It also made me think about who gets to write our history? Whose work do we value? Whose voice gets heard? I want to keep asking those guestions and I love that this play does that.

How would you describe each character in three words?

I enlisted the help of my cast with this one... Dessa: Smart, strong, passionate Mary: Curious, persistent, pioneer Nilo: Creative, follower, growing Esther: Artist, empathetic, optimistic.

What scene in Digging up Dessa is your favorite and why?

It's impossible to pick just one, but I love the variety of scenes this show has- it moves fast and keeps me on my toes. I love how the scenes in the dig site are brimming with possibility. I easily relate to the scenes at Dessa's home where they are navigating through the challenges of normal life (loss, change, relationships). The museum scenes feel grand and are a reminder that the stories we tell, the people we highlight, the artifacts we treasure, matter.





"Laura Schellhardt, Associate Professor of Instruction" https://communication.northwestern.edu/faculty/laura-schellhardt.html





Digging Up Dessa Cast Zoom Meeting with Playwright Laura Schellhardt



About the Playwright

Laura Schellhardt

Laura Schellhardt is a playwright, adaptor, author and Associate Professor at her alma mater Northwestern University. Laura Schellhardt's original works include Light Years Away, Digging Up Dessa, Ever in the Glades, Upright Grand, Air Guitar High, Auctioning the Ainsleys, The K of D, Courting Vampires and Shapeshifter. Her work has been produced at The Kennedy Center, La Jolla Playhouse, TheatreWorks, Seattle Repertory Theatre, Trinity Repertory Company, People's Light, Woolly Mammoth Theatre Company, Boston Court Pasadena, A Contemporary Theatre (ACT) and Northlight Theatre, among others. Schellhardt is a recipient of the NEA/TCG Theatre Residency Program for Playwrights, the Jerome Fellowship, ACT's New Play Award, the FringeNYC Best New Play Award, the AATE Distinguished Play Award and a Dramatists Guild Fellowship. Schellhardt received her MFA in playwriting from Brown University under the direction of Paula Vogel. She currently heads the undergraduate playwriting program at Northwestern University.

> The actors from EMU's production of *Digging up Dessa* got to talk to playwright Laura Schellhardt. Here's some of what she had to say about the play.....

> In the play, Dessa recognizes that Mary Anning did not get credit for her discoveries, and it frustrates and motivates her to stand up to patriarchy. When researching Mary Anning, playwright Laura Schellhardt searched on and off for about a year and looked at history books. Most history books only had short paragraphs about Mary Anning, her life, and her health, but the books about the men who took credit for her discoveries had a lot of information in them. Like Dessa, Schellhardt was frustrated that Anning did not get the recognition she deserved. She learned more by talking to historians and reading photocopies of Mary Anning's journal. Anning was the first to connect dinosaur fossils to the ones we have now. Esther 's character in Digging up Dessa is a love letter to single mothers. To accurately portray Esther, Schellhardt talked to her friends who are single mothers to get a better sense of what they go through. She also realized a lot of Theatre For The Young plays don't have single moms, and if they do, they are often one-dimensional. Passionate women are often called "Shrill," and emotions are considered problematic. Schellhardt hopes that girls viewing the play get a sense that they are enough.

Meet the Cast



Lauren Pride, She/They (Dessa)

Lauren Pride is a freshman majoring in Journalism. A fun fact about Lauren is that they play the electric bass!



Mollie Cardella, She/Her (Mary Anning)

Mollie Cardella is a senior majoring in Theatre Arts. A fun fact about Mollie is that she has a cat named Lilac!



Cassie Page, They/Them (Esther)

Cassie Page is a senior majoring in Elementary Education with minors in mathematics and integrated science. They are also the co-captain of the EMU forensics team. A fun fact about Cassie is that they have a pet snake named Fernando!



Dylan Benson, He/Him (Nilo)

Dylan Benson is a sophomore majoring in Theatre Arts. A fun fact about Dylan is that he is related to someone that signed the Declaration of Independence!



Isaac Cantrell, He/Him (Nilo understudy)

Isaac Cantrell is a sophomore double majoring in simulation, animation, and gaming. A fun fact about Issac is that he is a Dungeon Master of a Dungeons and Dragons campaign!



Kailynn Siffer, She/Her (Esther/ Mary Anning understudy)

Kailynn Siffer is a senior majoring in Theatre Arts. A fun fact about Kailynn is that she is learning American Sign Language!



Siri Quist, She/Her (Esther/ Mary Anning understudy) Siri Quist is a sophomore Theatre arts Major, EDT minor, Arts and Entertainment Management minor. A fun fact about Siri is that she played tuba in high school.



Rehearsal Photos



Dessa (Lauren) and Mary (Mollie)



Esther (Cassie) and Nilo (Dylan)



Dessa (Lauren) and Nilo (Dylan)



Mary (Mollie) and Dessa (Lauren)

*** |______



Esther (Cassie), Mary (Mollie), Nilo (Dylan), and Dessa (Lauren)



What is Paleontology?

Paleontology is the study of the fossils of plants and animals to better understand the earth's history. Examples of things they have found fossils of are dinosaurs, insects, plants, and mammoths, just like in the play!

<u>How do paleontologists</u> <u>hunt for fossils?</u>

When hunting fossils, paleontologists have to start by prospecting. Prospecting is when a paleontologist surveys the surface of the ground to find fossil fragments. If they find one, they brush away the dust to see if they can reveal more. Paleontologists then use tools like chisels, rock hammers, and awls (hole makers) to break away the rock covering the skeleton. Next, they apply a special glue to cracks and fractures to hold the fossil together. They then dig a trench around the bones so they may sit on a low platform while they are being wrapped in plaster to create a cast. When the cast is hardened, the fossil is carefully packed and sent to a museum.

"How Are Dinosaur Fossils Discovered and Collected?" AMNH. American Museum of Natural History, July 2012, https://www.amnh.org/explore/videos/dinosaurs-and-fossils/how-are-dinosaur-fossils-discoveredand-collected#:~:text=Awls%2C%20rock%20hammers%2C%20cbisels%2 C.sit%20on%20a%20low%20pedestal.



Mary Anning

Mary Anning (1799-1849) was a Paleontologist and fossil collector who discovered the Plesiosaurus, Ichthyosaurus, and Pterodactyl. Anning started fossil hunting around the age of 5 or 6 when her dad Richard started taking her on his adventures. Mary Anning was one of the first Paleontologists to compare dinosaur fossils to the fossils of modern animals. When she was alive, Mary Anning did not get credit for her discoveries. Mary Anning often sold her fossils to make ends meet, and the men who purchased them took credit for her work.

> "Mary Anning: the unsung hero of fossil discovery." Eyott, Marie-Claire. Natural History Museum. www.nhm.ac.uk/discover/mary-anning-unsung-hero.html

<u>Mary Anning Timeline</u>

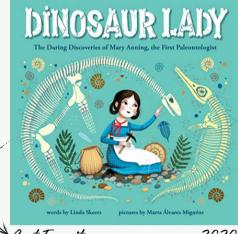
- **1799** Mary Anning is born in Lyme Regis, located in West Dorset to carpenter Richard Anning and Molly Anning. She is nine of ten siblings. She and her brother Joseph are the only ones to live till adulthood.
- 1805 Mary Anning starts fossil hunting with her dad Richard.
- 1810 Richard dies of tuberculosis.
- **1811** Mary's brother Joseph finds the skull of an Ichthyosaurus. Months later, Mary finds the rest of it.
- **1823** Mary Anning discovers the full skeleton of a Plesiosaurus and starts to become well known for fossil hunting but is not credited.
- **1828** Mary Anning is the first to find the fossil of a Pterodactyl.
- **1830** Childhood friend of Mary, geologist Henry De la Beche paints Duria Antiquior A More Ancient Dorset in her honor to raise some money. The painting includes Mary Anning's discoveries; the Ichthyosaur, Plesiosaur, and Pterosaur.
- **1840** Book of the Great Sea Dragons, is published based on the Plesiosaur.
- **1847** Mary Anning dies of breast cancer at age 47.

Hales, Sally. "19th Century Britain Timeline." Britain Magazine, Mar. 2016, https://www.britain-magazine.com/carousel/19th-centurybritain-timeline/.



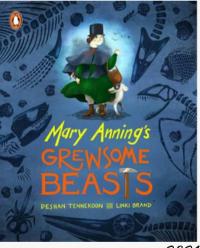


Mary Anning Books



Cast Favorite

2020



PATRICIA PIERCE

URASSIC MARY O

MARY NNING

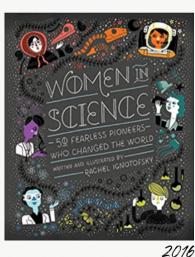
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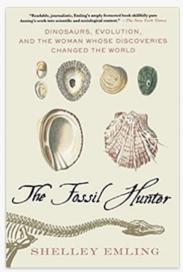
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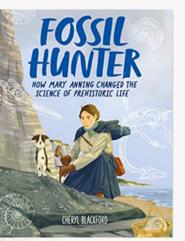




ONE GIR

BONE GIRL LAURENCE ANHOLT

illustrated by SHEILA MOXLEY



2022



Mary Anning:

cracked Open the World

The Girl Whe

2011

Momen in Science



Marie Curie (1867-1934) Marie Curie was a chemist who researched radioactivity and her discoveries helped pioneer the discovery of cancer treatments.



Katherine Johnson (1918 -2020) Black Mathematician, calculated flight paths for Nasa. She helped calculate the path for Apollo 11, the mission that sent Neil Armstrong and Buzz Aldrin to the moon in 1969.



Valerie Thomas (1943 -) Black woman scientist whose discoveries led to the creation of 3D movies.



Mae Jemison (1956 -) First Black woman to travel to space and become a mission specialist on the space shuttle Endeavor. Vicki. "She Had a Dream: Mae C. Jamison, First African American Woman in Space." National Air and Space Museum.



Rosalind Franklin (1920–1958) was one of the most overlooked women scientists in history. Her X-ray diffraction images of DNA enabled Watson and Crick to make their discovery of the double-helix shape. They received the Nobel Prize, and she remained in the shadows





Image Credit: Bettmann / Getty Images



Mary Engle Pennington (1872-

1952) was an American bacteriological chemist at the U.S. Department of Agriculture. Pennington's pioneering research led to sanitary methods of processing, storing, and shipping food.

Chien-Shiung Wu (1912-1997)

was a leading figure and pioneer in the field of physics. Wu was the first women faculty member hired in the physics department at Princeton University. She proved that identical particles do not always behave in the same manner.

Lise Meitner (1878–1968) worked with two other scientists to make one of the most important scientific discoveries of the 20th century: nuclear fission. Lise has an element on the period table named after her: Meitnerium.

Additional Resources

obamawhitehouse.archives.gov/women-in-stem

https://www.cnn.com/2020/01/27/world/womenin-science-you-should-know-scn/index.html

https://www.womenofthehall.org/science

https://www.weareteachers.com/women-scientists/

Click underlined text for links

Classroom Activities: Science & Drama

Title: Archeological Find- What Will Survive? Project

Purpose: Explore the kinds of evidence archaeologists and historians use to interpret the past **Materials:** Teacher may want to place specific organic and inorganic objects around the room. **Time:** 30 minutes for the in-class portion of the exercise

One of the purposes of an archaeologist is to explore the past and try to determine with the use of evidence what life was like for people and why they lived the way they did. Discuss/ Review the difference between things that are considered organic (living or once living) versus inorganic (never living).

- **Organic** remains include people, plants, animals, and anything made of plant or animal matter. These will tend to decay unless preserved in an airtight environment. Examples of organic remains include human, animal, and plant remains and objects and features made of plants and animals (food, paper, wood, leather).
- **Inorganic** remains include stone, metal, clay cement, plastic, and glass. These were never living and will not rot or decay the way organic remains do. They survive especially well in an airtight environment.

Teacher asks students to look around the classroom and make a list of the things (and people) that are organic and inorganic. Options:

- Class can work as a group and have a scribe, write the responses on the board.
- Teacher can have students work in groups with one scribe for each group.
- Teacher can have students work individually with paper and pen and come back together to discuss.

It's important to remember there are many items that are made up of a combination of both organic and inorganic materials. For example, a pair of leather boots would have the organic leather that would decay versus the metal that might be used to support the heel. Or a school binder where the paper is organic but the metal wire that binds them is not.

Imagine it is 1000 years from now and you are all archaeologists looking back into this time. Based on the evidence answer the following questions:

- What evidence would exist to let the archaeologists know this was a classroom?
- What would help determine the subject taught in the class?
- Based off what is left, what would the archaeologists learn about society from what they discovered?

Follow-Up Activity

Have the students go home and record the organic and inorganic items in their bedroom or their living room. Imagine that you were being researched and discovered by archaeologists.

- What would they determine about you?
- What evidence shows that?

Sources:

- McIntosh, Jane. 1996. The Practical Archaeologist: How We Know What We Know About the Past. New York: Checkmark Books.
- McIntosh, J. 2000. Archeology. London: Dorling Kinder- sley.
- Moloney, N. 1995. The Young Oxford Book of Archeology. Oxford: Oxford University Press.

Classroom Activities: Grief

Source: Blaine, L. & Maureen Carroll. (2000). "Understanding Different Views on Death." (PBS)

Point of View: Understanding Grief
Grade Band: 6-12
Purpose: to develop an understanding of the variety of ways people deal with death and grief. To explore how death and grief are represented in the media.
Materials: Access to the internet, paper, and writing utensils
Time: 45 minutes

Before starting this lesson and because of the nature of the topic, it's important to make sure you give a warning about the sensitive nature you are about to explore. It's recommended that if someone is uncomfortable with the topic they are allowed to withdraw from the space into a safe space or given an alternative assignment to focus on.

Divide the class into small groups of 2 or 3 and ask them to discuss their first experiences with death. Post the following questions as a guide for discussion within the groups:

- How did they learn about it?
- What did their parents teach them?
- Is there anything in common with their experiences?

If they haven't experienced death, they should be allowed to opt out of adding to the conversation but should listen to the others in the group. Afterwards, have the whole group come back together and have students who are comfortable sharing their groups' thoughts.

Many people don't learn about death through their parents. Instead, they learn from television (news), movies, cartoons, music, and other elements of popular culture. Ask each group to come up with examples of how death is represented in popular media. You may let them go onto the internet to find examples, but it's important that they only describe what they found. You don't want physical examples because it could lead to descriptive or inappropriate scenes (especially in horror films) that you don't want to have viewed.

You want to focus on the variety of ways death is represented. This could range from the gruesome to the serene to the ignored. This could go from dying in one's sleep to suicide to mass killings. As the instructor, you need to be prepared for where the conversation could go and be ready to reel it back when needed.

Based on the varied representations of death that were discussed, make a list as to how the media portrays grief.

Here is a working definition: GRIEF- the response to loss, particularly to the loss of someone or some living thing that has died, to which a bond or affection was formed. Although conventionally focused on the emotional response to loss, grief also has physical, cognitive, behavioral, social, cultural, spiritual, and philosophical dimensions.

Follow-Up Questions-

Why does grief affect some people in certain ways and other people in other ways? What are ways that people try to avoid grief? Can these ways be healthy?

Classroom Activities: Grief

Writing a letter to a loved one after they have passed is one-way people handle their grief. Reflect on a person or pet that has died. Have each student write a letter to that person or pet that has died to help them express their emotions and work through their grief. The following is a list of things you might have them include in the letter:

- How you feel
- What you miss
- What you want them to know
- What you might have wanted them to say to you when they were alive
- How you will remember them
- How they will stay a part of you

You may decide as a class if the letters will only be shared with the teacher or the whole class. No one should be forced to share with the full class.

Alternative: If a student is uncomfortable writing a letter to someone/ something they know then have them write a letter to a character that died from a movie or book they liked.

Alternative: Create an online project called "Love Letters to Our Loved Ones." This could include all the letters the class has written or those who want to participate. This can keep people who want to share but don't want to physically read their letters in a safe space. This allows those students who aren't comfortable at all to avoid hearing any of the letters. It allows those who want to share to see common bonds with others that might have experienced the same emotions.

Source: Blaine, L. & Maureen Carroll. (2000). "Understanding Different Views on Death." (PBS).

Resources

K<u>QED Education Network</u>

YA Books on Grief and Loss is a

recommended website with Children's Literature and Young Adult Reading. Look over its content before sending it to your students to make sure it aligns with your school district's philosophy.



YA BOOKS ABOUT GRIEF AND LOSS Adiba Jaigirdar | Mar 25, 2022

Classroom Activities: History

Title: Honoring with Recognition Purpose: Explore what it means to give recognition to someone through honoring their accomplishments Materials: Access to the computer Time: 45 minutes

Watch video on Monopoly- CBS Monopoly Elizabeth Magie

Discuss the following question as a **whole class:**

- What do you think life was liked for women during Elizabeth Magie's time?
- Why do you think Charles Darrow did what he did?
- How do you think Elizabeth felt about what had happened to her?
- Why do you think she felt that way?

Put students into **small groups** and have them discuss the following:

- What are situations where we recognize people? For what type of things do we recognize others for?
- Describe a time where you were given recognition for something? How did you feel?
- Describe a time a time where you felt you should have been given recognition for your actions? How did you feel?
- Has anyone ever taken recognition for something that you did? Why do you think that happened? What made them do it?
- Is there a time where you or someone you know should have recognized someone for their deeds?
- Why do people not like being recognized for the actions?
- Why is it important for people to recognize others for their actions or deeds?

Return to whole class and discuss responses.

Sources:

- CBS Mornings. (2015, March 21). The surprising history behind the board game "monopoly". Retrieved March 26, 2023
- Monopoly's lost female inventor. National Women's History Museum. (2018, September 1). Retrieved April 10, 2023, from https://www.womenshistory.org/articles/monopolys-lostfemale-inventor.
- YouTube. (2019, November 1). The surprising history behind Monopoly | doha debates. YouTube. Retrieved April 19, 2023, from https://www.youtube.com/watch? v=AN5Yb_jzZZ0.

Recognition=

to give validity or acknowledgement to someone or something usually for doing or participating in something.

Classroom Activities: History

Create a Recognition Board

Find someone in your family or community life with whom you would like to give recognition to. They should be someone who has done something to be recognized for.

Things to consider:

- What deeds have they done to change or help the family?
- What sacrifices have they made to make life better?
- What do they add to your life specifically?
- What traits do they have that should be recognized?

Format:

Use any type of format (i.e powerpoint, canva, google slides, etc.) to put together your board. Be creative with your presentation. Include pictures.

Teacher can decide how the presentations will be shared.

Extensions:

- Add to your recognition board by finding someone in your school who you feel needs to be recognized and do the same thing.
- People seldom look at themselves and think about the value they bring to others, so your final recognition should be about yourself. What should you be recognized for? Take pride in your attributes and qualities.

Digging Up Dessa Glossary

	Mary Anning-	English fossil collector, dealer, and paleontologist who became known worldwide for the discoveries she made in Jurassic marine fossil beds in the cliffs along the English Channel. Anning's findings contributed to changes in scientific thinking about prehistoric life and the history of the Earth. Anning also discovered the Plesiosaurus, Ichthyosaur, and Pterodactyl.
	Voila!	p.4- means "there it is." It's a borrowed expression from the French.
	Fossil	p.4- the remains or impression of a prehistoric organism preserved in petrified form or as a mold or cast in rock.
	Careening	p.5- move swiftly and in an uncontrolled way in a specified direction.
	Speculative	p.6- based on guessing or opinions that have been formed without knowing all the facts.
	Paleontologist	p.6- a scientist who studies the history of life on Earth through fossils.
	Hyperbole	p.8- exaggerated statements or claims not meant to be taken literally.
	Sediment	p.10- a matter that settles to the bottom of a liquid.
	Ukulele	p.11- a small four-stringed guitar of Hawaiian origin.
	Jingles.	p.13- a short slogan, verse, or tune designed to be easily remembered, especially as used in advertising.
	Intracranial	p.14- within the skull.
	Mastodon	p.16- a large extinct elephant-like mammal.
	Patriarchy	p.17- a system of society or government in which men hold power and women are largely excluded from it.
	Megalosaurus	p.18- a large carnivorous bipedal dinosaur of the mid-Jurassic period, whose remains have been found only in England and France.
	lguanadon	p.19- a plant-eating dinosaur of the genus Iguanodon that lived in Europe early in the Cretaceous Period.
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Digging Up Dessa Glossary



- **Ichthyosaur** p.19- an extinct marine reptile of the Mesozoic era resembling a dolphin with a long pointed head, four flippers, and a vertical tail.
- **Plesiosaur** p.19- a large extinct marine reptile of the Mesozoic era, with a broad flat body, large paddle-like limbs, and typically a long flexible neck and a small head.
- **Resilient** p.25- to recover quickly from difficult conditions.
- **Inscription** p.32- words written into something like a headstone or a watch.
- **Hypothesis** p.36- a proposed explanation based on limited evidence as a starting point for further investigation.
- **Elusive** p.41- difficult to find.
- **Dorset** p.41- a county in South West England on the English Channel coast. The name originated from the county of Dorchester.
- **Brackish** p.42- slightly salty, as is the mixture of river water and seawater.
- Lyme Regis p.42- a town in West Dorset, England.
- **Sedimentary** p.42- rocks formed from pre-existing rocks or pieces of once-living organisms.

Ammonite p.44- an extinct sea creature.



- **Hearthstone** p.47- Set within the Warcraft universe, Hearthstone is a digital-only, turn-based collectible card game that pits two opponents against each other.
- **Specimen** p.53- an example of a species or type for scientific study.
- **Polemic** p.54- to express a controversial opinion about someone.
- **Pulp cavity** p.60- the space within a tooth that contains the pulp. The pulp provides the tooth nutrition.
- **Eclipse** p.77- to block out.

Hollow p.79- empty; without significance.