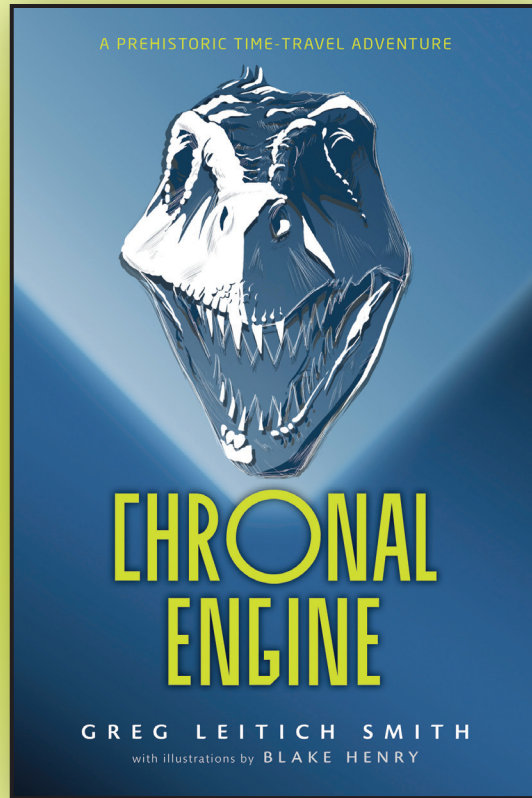


# ***Chronal Engine Activity Kit***



## **CHRONAL ENGINE**

**BY GREG LEITCH SMITH**

**WITH ILLUSTRATIONS BY BLAKE HENRY**

**TIME MACHINES! KIDNAPPING! DINOSAURS!**

**E**VERYONE IS FASCINATED by the fossilized dinosaur tracks on Grandpa's land. When Emma is kidnapped at the tracks, her brothers Max and Kyle join forces with their new friend Petra to go back in time to rescue her. Using Grandpa's time machine, the Chronal Engine, they take the road trip of a lifetime, encountering *Triceratops*, *Nanotyrannus*, *Alamosaurus*, and terrifying *T. rex* as they search for clues. Can three teens hunt down a kidnapper, forage for food, and survive the Cretaceous to bring Emma home?

*This fast-paced adventure novel will keep young readers turning the pages to see what could possibly happen next!*



# Discussion Questions



Max is the only one of the three siblings who has inherited the “dinosaur gene” from his mother and her family. How does Max’s knowledge of dinosaurs help the teens when they find themselves in the Cretaceous Period?



The lives of the Takahashi family have been marked by episodes of loss and estrangement, from the death of the father in Afghanistan to the alienation of the grandfather from the rest of the family. How do these difficult elements in their family help or hinder Max, Kyle, and Emma in their efforts to survive in another time period?



Through the difficulties of maintaining their survival, Max and Kyle forge a stronger bond. The new characters of Petra and Samuel represent an unknown to the brothers. Max and Kyle question what motivates each character and what knowledge each may possess. The brothers question whether they can trust Petra and Samuel throughout their time in the Cretaceous period. Discuss the role of trust in a group’s quest to survive.



As a reader, which characters were likable? Which character would be an asset in a situation that would require survival skills? How would you imagine this character helping you in a high stakes situation of survival?



The concept of time travel allows *Chronal Engine* author Greg Leitich Smith to utilize the literary device of foreshadowing. What examples of foreshadowing did you recognize as you were reading the novel? What story events involving foreshadowing prepare the groundwork for a sequel to *Chronal Engine*?



The element of conflict is central to all stories, including *Chronal Engine*. What conflicts did you notice between the siblings, between all the characters, and with nature? Describe and discuss the physical, moral, intellectual, and/or emotional conflicts found in the story.



# Activities

## PICTURE THIS

The author of *Chronal Engine* uses vivid detail to describe the landscape of the Cretaceous period. Using the descriptive excerpt below, create a colorful illustration of the setting the characters find themselves in when they travel back in time.

*The (VW) Beetle rested at an angle on a mound, nestled against a giant tree, at least a hundred feet tall, at the edge of a forest of other giants—redwoods, I thought—some with trunks as much as ten feet in diameter. The undergrowth seemed to be mostly ferns, with occasional stands of stubby palms and cycads.*

*Away from the forest was a sandy beach, about seventy-five, maybe a hundred feet wide, leading up to an endless expanse of glassy, still water.*

## POINT OF VIEW

The majority of *Chronal Engine* is told from Kyle, Max, and Petra's point of view. The story details their journey back in time and their attempt to rescue Emma after she is kidnapped. Retell a portion of the story from Emma's point of view. Start with the section of the story (below) where she is kidnapped. Express what she is feeling and seeing as she is captured and dragged back to the Cretaceous period.

*. . . there was a flash of light on the creek bank and a man appeared from nowhere next to Emma. . . . The man was wearing a tweed jacket with a vest and a straw hat that looked like something he'd stolen from a barbershop quartet. Or from another time. He was holding a Recall Device in one hand and a pistol in the other. Before any of us could react, he had his arm around Emma's neck from behind. . . . It was too late. There was another flash of light and a booming sound, and then both my sister and the man were gone.*

## LIGHTS, CAMERA, ACTION!

Imagine that *Chronal Engine* were to be adapted into a screenplay for a movie. Design a movie poster for the film. How would you advertise the story? What scene would you use on the poster? Which actors would star in the movie? What slogan would you use to entice moviegoers to see *Chronal Engine* in the theater?

## DINOSAUR DETAILS

Max has extensive knowledge of dinosaurs and uses his understanding of the creatures to help Kyle and Petra survive in the Cretaceous period. Select a dinosaur mentioned in *Chronal Engine* and gather research about the dinosaur to share with your class or reading group.

## CAPTION THIS

The illustrations that appear throughout the novel illustrate significant events in the story. Go back through the book and examine each illustration closely. Write a caption for each that expresses what's going on at that particular moment in the narrative.



This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.



# Dinosaur Word Search

The dinosaur types and names listed at the bottom of this page are hidden within the letters below. Words can appear backward, frontward, and diagonally. Can you find them all?

X U T S U W M N K M R J Y G T A S Z W D U V K Q C S P U Z K  
V O N M U S K M J U W R Z W Y B Q M F P L X Q O G S U S G S  
G D S G C H M I A O U R K R R R O T P A R O R C I M K U L U  
Y X X C Z V C S G A X G M O A N Z Y I B B W K N W A I V X C  
U L G V N W O U S P G C T H N J K B U X C N G K G H L P O Y  
X Y M S J E L O S S X F U E N O R P O S L S Q Z R H I O E E  
T J A H A Q N D Q O X Q A L O K A A S J E U A P U W H Y M T  
C I U M M A A R D U N K U Y S R C O L L B M Q G J J T G S M  
F Q O Q T Z F K F Q G I R R A Z O K P A O I G Z D Q I B S K  
Q R D I Q Y J E Y S O E E S U N V T R Q M M O R J H S F P Z  
D X T S A N V P U V F Q A D R Q T K P H Z O X Q W X P O O E  
X B C B W R V O I X K U S Z U H Y D T A D H S E U H P Z T B  
S Q I C Q Y G R V C R B Q U S B R R Q M R T E A J V H U A P  
P T E R O S A U R O E K G W R M A M L F Z I T M U U J J R T  
B S Y D T P E K L S L F C G E X N B K S V N C R Z R D L E J  
I W Y W T G F O X I X D P D X E N R H N C R G O W S U P C O  
X K R O F A P A T O S A U R U S O M C M H O X C L Y O S I C  
O O R H T H S G B D O U F T T F S B X M T S O Y O E B L R V  
H I V P U I J E U Y Y K R B S T A P K L U J W E S P V O T F  
D D R S I D C A B X B I R P P H U X Z L D K D I U R U X K X  
D E C O G A K G L X Y L W W Q T R V O Z L V O H B O W C R E  
C N G Z G H K L H L L B N V K A M O O S C T F R Y L N P V D  
U X O A Y H F Y B Q F F P C B E H O F K W G Z R P R A X I R  
U K O X M L D J B A Q K P V O V S M O F S E Q R J I D R J Q  
L E X J L Z N V S N A D L O C G H P Q H P W R X U I L G D L  
S P O T A R E C O T P E L S T U G K Q T W H E P Z G T Z X K  
O S P Y C U F R Q E L I Y B T R G F H J R Y J M O S B V K Q  
D E T Q F V M P B L K S I E Y H J X D Q N Y A L G S Z X A Z  
Q U C B W B Q L Y J E Q F I F E U F C C M A F I F P I S L E  
E W Z W O S X W F X A O J V D X L M A G T W H F S S U X I B

ALAMOSAUROS  
APATOSAURUS  
DEINOSUCHUS  
DROMAEOSAUR

LEPTOCERATOPS  
MICRORAPTOR  
ORNITHOMIMUS  
OVIRAPTORID

PARASAUROLOPHUS  
PTEROSAUR  
TITANOSAUR  
TRICERATOPS

TYRANNOSAUR  
TYRANNOSAURUS REX  
VELOCIRAPTOR



# Chronal Cryptogram

The cryptogram below features an important concept from *Chronal Engine*. Can you solve it?

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
													8												

\_\_\_\_\_ **N** \_\_\_\_\_ **N** \_\_\_\_\_ **N** \_\_\_\_\_ **I**  
17 23 15    24 23 25 20 8    1 14    15 8 16 7    8 15    3 20 25 11 21








# Word Scramble

Unscramble each of the clue words from *Chronal Engine*.

Take the letters that appear in  boxes and unscramble them to answer the final question.

KAWNOSGVLE

									
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LAECRL EEVIDC

EECASUCTOR

									
--	--	--	---	--	--	--	---	--	--

TIEM ENCAHMI

TSRYNNAARUO

										
--	--	--	--	--	--	--	---	--	--	--

What do you think Max wants to be when he grows up?

	<b>P</b>												
--	----------	--	--	--	--	--	--	--	--	--	--	--	--

