

## The TRENCH CURRICULUM & PROJECT IDEAS

Dear Teachers:

One of the goals of the ADOPT-AN-AUTHOR program is to assist teachers by providing a pool of easily accessible curriculum and project ideas. Materials will grow as more teachers e-mail me their ideas over the coming school year. I hope you participate.

**The TRENCH** is the sequel to **MEG; A Novel of Deep Terror** and the second in a 3-book series featuring *carcharodon Megalodon*, the fearsome 60-foot, 40,000 pound prehistoric cousin of the great white shark. If your students have not read MEG, I suggest you begin with it before assigning **The TRENCH**. I am sure you will find both books to be fast-paced page-turners, something that will keep your readers and non-readers on the edge of their seats. Many teachers begin with **MEG**, then assign **The TRENCH** to be read on their own.

The interactive website: [www.SteveAlten.com](http://www.SteveAlten.com) offers supplemental information for each book, as well as educational links, contests for readers, exciting tours, background information on how I was published, and free downloadable images. Everything is designed to enhance your student's reading experience.

EDUCATIONAL SHARK LINKS for both novels can be accessed by clicking on the MEG book cover, then SHARK LINKS. This menu appears at the far right of the screen. Some students may have to adjust their screen to see it.

One of the best and most unique aspects of the ADOPT-AN-AUTHOR program is having direct access to a *New York Times* Best-Selling author. I invite your students to e-mail me. A link is provided in the website. I read each and every e-mail, then send out a standard reply to each letter, which I personalize. This is NOT an automated response. After four years of answering e-mail, I know exactly what everyone wants to know. Second and third letters are handled differently.

All of my novels are part of the ACCELERATED READER program and the SCHOLASTIC READING COUNTS program.

As a former educator, it is my goal to provide teachers with a very unique program that combines thrilling novels with exciting curriculums and opportunities for students to converse with a best-selling author. I am personally financing this entire venture. This is my commitment to you. All I request is that (once you see the results) you simply spread the word about the program throughout your school and among your peers.

Please do not hesitate to contact me with any questions or input. I think you will be impressed!

–Steve Alten

## **CURRICULUM MATERIALS**

Because students also have access to this section, answers to questions will only be provided via e-mail (at your request) to teacher e-mail addresses registered in the Adopt-An-Author program.

**Materials are divided as follows:**

- 1. Characters**
- 2. Chronological Events**
- 3. Acronyms & Vessels**
- 4. Vocabulary**
- 5. True-False Questions**
- 6. Discussion Points**
- 7. Projects**
- 8. Multiple Choice Questions**
- 9. Science/Oceanography**
- 10. Matching**
- 11. Megalodon Shark Anatomy**
- 12. Settings**
- 13. How Deep Can They Go?**
- 14. Creative Writing**

## **CHARACTERS**

Major Characters:

**Prof. Jonas Taylor**

Minor Characters:

**Captain Morgan**

**Terry Tanaka**

**Mac**

**Masao Tanaka**

**Benedict Singer**

**Celeste**

**Dief**

**Sergei**

**Dr. Maren**

**Harry Moon**

**Heath Williams**

**Captain Hoppe**

**Pete Soderblom**

**Andrew Furman**

**Big Daddy Wisdom**

**Dave Ross**

**Ken Berk**

**Barry Leace**

**Ellis Richards**

**Linda Heron**

**Norton Binder**

**Bruce & Jan Henkel**

## Chronological Event Questions

1. Retired Navy deep-sea pilot Barry Leace is piloting the \_\_\_\_\_.
2. Leace does not get along with \_\_\_\_\_, who he considers arrogant.
3. The sub is attacked in the \_\_\_\_\_.
4. Jonas Taylor is suffering from \_\_\_\_\_.
5. The name of the captured Megalodon pup is \_\_\_\_\_.
6. Masao Tanak receives a fax from \_\_\_\_\_, ordering them to conduct an investigation regarding the submersible accident.
7. The Tanaka Institute is now owned by \_\_\_\_\_, who insists Jonas join him in the Mariana Trench.
8. Celeste originally comes from \_\_\_\_\_.
9. Benedict enjoys throwing around \_\_\_\_\_ phrases.
10. Benedict's eyes are \_\_\_\_\_, the color resulting from an industrial accident.
11. The three juveniles broke into the Institute and were \_\_\_\_\_.
12. \_\_\_\_\_ stays on board the Goliath with Benedict.
13. Benedict suspects Terry has glimpsed the Russian reactor, known as a \_\_\_\_\_.
14. Circling just outside the Megalodon's steel gate are dozens of \_\_\_\_\_.
15. \_\_\_\_\_ rescues Jonas from the above.
16. Terry descends to the Mariana Trench on-board the \_\_\_\_\_.
17. The huge submersible lab in the Trench is called the \_\_\_\_\_.
18. *Veni, Vedi, Vici* translates to: I \_\_\_\_\_, I \_\_\_\_\_, I \_\_\_\_\_.
19. Ken Berk nearly dies when he tries to assist a stranded \_\_\_\_\_.
20. \_\_\_\_\_ warns Terry that Sergei wants to kill her.
21. Cape \_\_\_\_\_ located off the Oregon/Washington coast, possesses some of the fiercest seas in North America.
22. Jonas believes he is destined to die in \_\_\_\_\_.
23. The four lifeforms that attack the Prometheus are scared off by the \_\_\_\_\_.
24. Sea World administrators believe Angel will hunt down Tootie, their \_\_\_\_\_.
25. Angel goes berserk, then attacks the tall ship, Lady Washington, mistaking it for a \_\_\_\_\_.
26. \_\_\_\_\_ attempts to use the AG-1 to lead Angel away, but dies in the process.
27. Terry learns that Heath Williams really works for \_\_\_\_\_.
28. The massive fossilized skull excavated by the Prometheus belonged to a \_\_\_\_\_, a type of marine reptile.
29. The crew of the William Beebe use a dead \_\_\_\_\_ as bait to catch Angel.
30. Jonas nearly dies in Alaska's Gulf from \_\_\_\_\_, caused by cold water.
31. Celeste drugs Jonas to learn the secret location of \_\_\_\_\_.
32. Terry learns Benedict is really searching the trench to find \_\_\_\_\_, which possess a rare blend of Helium-3 and deuterium.
33. The seismic area located around the Pacific Rim is nicknamed the \_\_\_\_\_.
34. The bull whale know as Mad Max is a \_\_\_\_\_ whale.
35. Angel returns to the Mariana Trench in order to \_\_\_\_\_.
36. In order to survive in the hangar, Terry hides in a \_\_\_\_\_.

37. Jonas and Terry escape in a pod, only to be engulfed by \_\_\_\_\_.
38. They are “rescued” by \_\_\_\_\_.
39. Angel gives birth to \_\_\_\_\_ male pups.

## Acronyms & Vessels

### Acronyms:

1. UNIS
2. JAMSTEC
3. AG I & AG II
4. GTI
5. SOSUS

### Vessels:

- Proteus
- Goliath
- Prometheus
- Epimetheus
- Benthos

6. ITER

William Beebe

Lady Washington

Cachalot

## Vocabulary

1. MOSSAD	p. 8	31. manganese	p. 342
2. Hydrothermal vents	p. 8	32. heinous	p. 343
3. Megaplumes	p. 9	33. isotope	p. 344
4. Cretaceous	p. 9	34. deduced	p. 344
5. Carcharodon Megalodon	p. 10	35. nodules	p. 344
6. Lexan	p. 19	36. primordial	p. 345
7. transom	p. 57	37. inert	p. 345
8. Tokamak	p. 75	38. affiliates	p. 347
9. ampullae of Lorenzini	p. 86	39. judicial	p. 347
10. Carcharodon Carcharius	p. 86	40. convergent	p. 351
11. pony bottle	p. 86	41. cetacean	p. 352
12. titanium	p. 95	42. leviathans	p. 353
13. Anglerfish	p. 95	43. cachalot	p. 353
14. herbivores	p. 175	44. behemoths	p. 356
15. Dragonfish	p. 176	45. serrated	p. 357
16. fusion	p. 233	46. girth	p. 358
17. Deuterium	p. 233	47. ether	p. 363
18. Tritium	p. 233	48. cryptogram	p. 366
19. Kronosaurus	p. 263	49. genus	p. 367
20. chemosynthesis	p. 265	50. bioluminescent	p. 368
21. transients	p. 272	51. mantra	p. 369
22. Mesozoic	p. 321	52. kaleidoscope	p. 373

23. hypothermia	p. 325	53. reconnaissance	p. 377
24. delirious	p. 329	54. insemination	p. 382
25. estrus	p. 330	55. Pliosaurus	p. 386
26. subducted	p. 339	56. surveillance	p. 393
27. gorge	p. 339	57. melancholy	p. 400
28. Tectonic	p.339	58. decapitated	p. 419
29. impregnable	p. 340	59. conical	p. 420
30. antechamber	p. 342	60. oblivion	p. 423

## TRUE - FALSE QUESTIONS

1. (TRUE, FALSE) The *Benthos* is shaped like a giant sphere to better handle the pressures of the abyss.
2. (TRUE, FALSE) Four years have passed since Jonas last piloted a submersible for the Navy.
3. (TRUE, FALSE) Angel prefers the canal to the main tank.
4. (TRUE, FALSE) Benedict Singer enjoys speaking Latin phrases.
5. (TRUE, FALSE) Benedict's eyes were always emerald.
6. (TRUE, FALSE) Angel wants out because she is hungry.
7. (TRUE, FALSE) Great white sharks are circling the canal because they are attracted to Angel's scent.
8. (TRUE, FALSE) Terry insists on entering the Mariana Trench because she is afraid of her father.
9. (TRUE, FALSE) The *Epimetheus* and *Prometheus* are names derived from Greek mythology.
10. (TRUE, FALSE) The Megalodon's favorite foods are whales and sea lions, because it enjoys the taste of blubber.
11. (TRUE, FALSE) The Megalodon's lateral line is a movement detector, capable of sensing prey miles away.
12. (TRUE, FALSE) Mac thinks Jonas is suffering from "survivor's guilt."
13. (TRUE, FALSE) Terry lies to JAMSTEC because she is afraid of losing their contract.
14. (TRUE, FALSE) The huge fossil unearthed along the Mariana Trench sea floor belonged to a Megalodon.
15. (TRUE, FALSE) Sea World's personnel accidentally net Angel.

16. (TRUE, FALSE) Angel attacks the *Lady Washington* because she is hungry.
17. (TRUE, FALSE) A Tokamak is a Russian fusion reactor.
18. (TRUE, FALSE) Gasoline tanks are used to make the *Benthos* more buoyant.
19. (TRUE, FALSE) Helium-3 is an element in great abundance on our planet.
20. (TRUE, FALSE) Pressure within the Mariana Trench can reach 16,000 pound per square inch.

### Discussion Points

1. Why does Jonas Taylor refuse to return to the Mariana Trench?
2. If you could visit the bottom of the Mariana Trench in a submersible like the *Benthos*, would you go?
3. Is it easier to explore space than the bottom of the ocean? Why?
4. Why does the Mariana Trench remain unexplored? Should we explore it?

## PROJECTS

1. Create a detailed sketch of a scene in the book.
2. Write a biography on one of the main characters
3. Write two journal entries from a character's point of view.
4. Give a 2 minute speech about the novel in front of the class
5. Create a collage based on the novel.
6. Paper mache:
  - a) A MEG
  - b) A MEG tooth
  - c) A mini-sub
  - d) a Kronosaurus
7. Contact the Author via e-mail and interview him.
8. Create a book cover design or movie poster.
9. Design a video game for The TRENCH.
10. Cast characters for The TRENCH movie.
11. Do a book report on
  - a) Megalodon sharks
  - b) deep-sea submersibles
  - c) Mariana Trench
  - d) hydrothermal vents
  - e) Kronosaurs
12. Website assignments:
  - a) download a free image
  - b) write the author
  - c) take the tour of the ABYSS or TANAKA LAGOON
  - d) enter a contest
13. Write a scene you would like to see in the next MEG book (Primal Waters) and e-mail it to the author.

## MULTIPLE CHOICE QUESTIONS

1. Pressure in the Mariana Trench can reach as high as:
  - a) 160 pounds per square inch
  - b) 1,600 pounds per square inch
  - c) 16,000 pounds per square inch
  - d) 160,000 pounds per square inch
2. Angel associates the voodoo drums with:
  - a) feeding time
  - b) whales
  - c) escape
  - d) mating rituals
3. Terry decides to join Benedict in the Mariana Trench because:
  - a) she wants to kill a Meg.
  - b) she wants to prove she's tough.
  - c) she's afraid JAMSTEC will cancel her father's contract.
  - d) she is mad at Jonas.
4. Life forms living in the abyss often glow to:
  - a) attract prey
  - b) attract mates
  - c) all of the above
  - d) none of the above
5. Great whites are circling outside of Angel's canal because:
  - a) They want to kill the Meg.
  - b) They are attracted by the voodoo drums.
  - c) They are attracted by Angel's estrus scent
  - d) They are hunting Jonas.
6. Jonas is convinced his nightmares are a warning that:
  - a) he is meant to die in the Trench.
  - b) he is meant to be devoured by a Megalodon.
  - c) all of the above.
  - d) none of the above.
7. Jonas secretly wants to:
  - a) kill Celeste.
  - b) kill Angel.
  - c) marry Celeste
  - d) retire and raise horses.

8. The Ring of Fire refers to
  - a) hydrothermal vents in the Mariana Trench.
  - b) Angel's jaws.
  - c) A volcanic area in the Pacific Rim
  - d) Jonas's engagement to Celeste.
  
9. Celeste learns Benedict is really:
  - a) her brother
  - b) Jonas's father
  - c) Terry's uncle
  - d) her father
  
10. In the final scene:
  - a) Angel saves Jonas
  - b) Angel kills Celeste
  - c) Jonas saves Terry
  - d) all of the above

## Science/Oceanography

### Define the following:

1. Deep sea trenches
2. Hydrothermal vents

3. Thermocline
4. Hadal zone
5. Challenger Deep
6. JAMSTEC
7. Bathyscaphe
8. Tube worms
9. Dermal denticles
10. Argonaut
11. Ring of Fire
12. Caudal Fin

**Matching:**

\_\_\_\_\_ **carcharodon Megalodon**

\_\_\_\_\_ **Kronosaurus**

\_\_\_\_\_ **hydrothermal vent**

\_\_\_\_\_ **Vini, Vidi, Vici**

\_\_\_\_\_ **thermocline**

\_\_\_\_\_ **cetacean**

\_\_\_\_\_ **Prometheus**

**A - Black smoker**

**B - back of the boat**

**C - I came, I saw, I conquered (Latin)**

**D - Warm-cold layer**

**E - Prehistoric Marine Reptile**

**F - Right side of a boat**

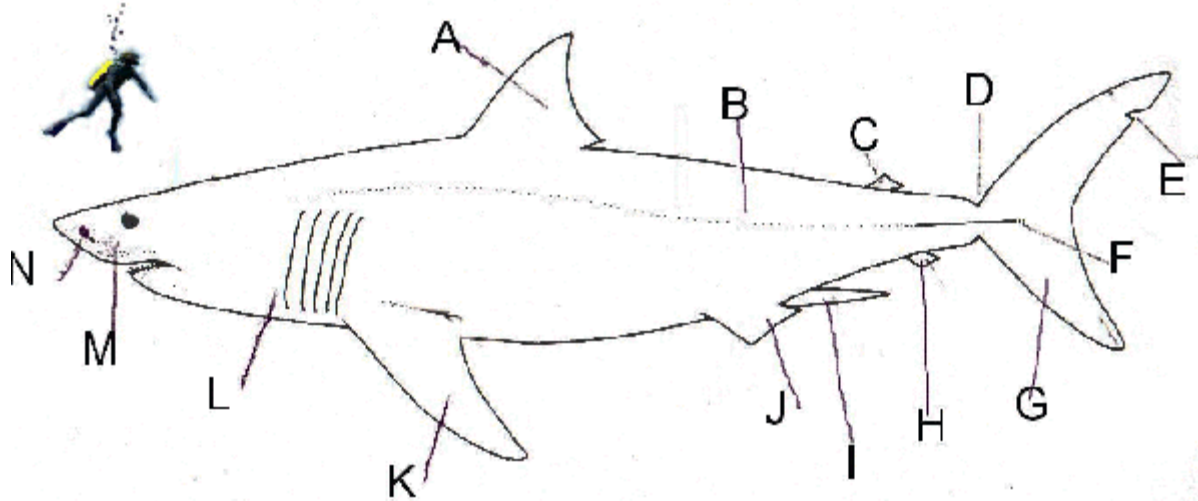
**G - stole the Sun's power and gave it to man**

\_\_\_ Resurgam

H - Classification of whales

\_\_\_ starboard

I - I shall rise again (Latin)



\_\_\_ stern

J - Front of a boat

\_\_\_ bow

K- Left side of a boat

\_\_\_ port

L- Prehistoric cousin of Great White shark

### MEGALODON SHARK ANATOMY

\_\_\_ Nostrils

\_\_\_ Pre-caudal Notch

\_\_\_ Pelvic Fin

\_\_\_ Gill Slits

\_\_\_ Dorsal Fin

\_\_\_ Caudal Fin

\_\_\_ Lateral Line

\_\_\_ Clasper

(males only)

\_\_\_ Second Dorsal Fin

\_\_\_ Ampullae of Lorenzini

\_\_\_ Anal Fin

\_\_\_ Caudal Notch

\_\_\_ Caudal Keel

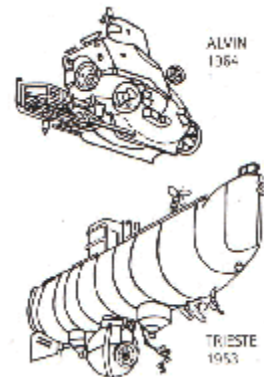
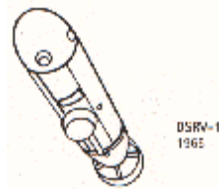
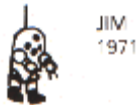
\_\_\_ Pectoral Fin

## SETTINGS

1. Hadal Zone
2. Mariana Trench
3. Cape Disappointment
4. Tanaka Oceanographic Institute
5. Tanaka Lagoon
6. Gray's Harbor
7. Hydrothermal vents
8. Barkley Sound
9. Gulf of Alaska
10. Ring of Fire

**How Deep Can They Go?**

- |                        |                 |                |                |
|------------------------|-----------------|----------------|----------------|
| 1. Man (no gear)       | A. 10 feet      | B. 40 feet     | C. 150+ feet   |
| 2. SCUBA diver         | A. 40 feet      | B. 165 feet    | C. 300 feet    |
| 3. JIM Diving suit     | A. 400 feet     | B. 700 feet    | C. 2,000 feet  |
| 4. Nuclear submarine   | A. 900-1200 ft. | B. 2,000 feet  | C. 5,000 feet  |
| 5. DSRV rescue sub     | A. 2,000 feet   | B. 5,000 feet  | C. 10,000 feet |
| 6. Sperm Whales        | A. 200 feet     | B. 1,000 feet  | C. 4,000 feet  |
| 7. ALVIN submersible   | A. 13,000 feet  | B. 20,000 feet | C. 30,000 feet |
| 8. Nautil submersible  | A. 15,000 feet  | B. 19,500 feet | C. 30,000 feet |
| 9. Trieste bathyscaphe | A. 15,000 feet  | B. 35,800 feet | C. 41,200 feet |
| 10. Mariana Trench     | A. 30,500 feet  | B. 35,800 feet | C. 41,200 feet |



### CREATIVE WRITING:

### Assignment:

**Create your own Megalodon shark attack scene. Be sure to include:**

a) Characters involved

b) Setting

c) Vantage Point of

1) Victims

2) Megalodon

3) Third Person Narrative