

Grade Levels(s): K , 1st , 2nd , 3rd , 4th , 5th , 6th , 7th ,
8th , 9th , 10th , 11th , 12th
Subject(s): ELA, Science

Wonder of the Day #1170
Are All Inventors Scientists?

Laura McShane

Think like a Scientist! 40 min

Objective:

Have second grade students use adjectives to describe a scientist.

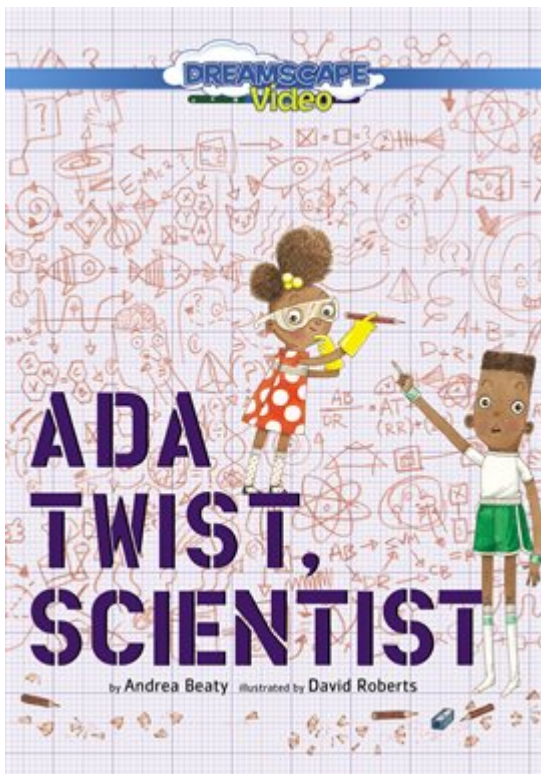
Big Idea:

What makes a person scientist?

1. Warm Up / Anticipatory 15 min

Read along Wonderopolis post: Are All Inventors Scientists?

<https://wonderopolis.org/wonder/are-all-inventors-...>



<https://www.hoopladigital.com/title/11894756>

Watch fictionalized story Ada Twist Scientist

2. Investigation and New Learning 20 min

Use the white board to ask kids to use words to describe a scientist-spell the words on the Smartboard

http://msue.anr.msu.edu/news/what_makes_a_good_sci...

- **Curious.** Scientists are curious about their world. They want to know why things happen and how things work.
- **Patient.** Scientists are patient as they repeat experiments multiple times to verify results.
- **Courageous.** Scientists work to discover answers often times for years and with numerous failures. They recognize that failed experiments provide answers as often as successful ones.
- **Detail-oriented.** In science, answers are built upon observations and collected data. Close attention to details is important in the development of science theories. Detailed observations in one experiment could also lead to answers in another.
- **Creative.** Contrary to popular opinion, scientists must be creative, able to think outside the box and envision things that cannot be seen.
- **Persistent.** Scientists recognize their work may take decades, and that their approach may be wrong and their work could be proven false by future scientists.
- **Communicative.** Scientists need good communication skills. They may need to work as part of a team, share information with the public or collaborate with colleagues around the world.
- **Open-minded and free of bias.** Scientists need to suspend judgment so they can continue to observe and collect data while searching for the best possible solution. Even though they're working with a hypothesis in mind, they must remember there are many more hypotheses.
- **Critical thinkers and problem-solvers.** Scientists need to analyze information and make critical decisions to solve experimental problems or world problems.

<https://www.dkfindout.com/us/video/more-find-out/c...>

Resources

- <http://wg.wonderopolis.org/uploads/users/1209/339/arthropod.pdf>

3. Review & Check for Understanding 30 min

Use on line resources to help kids classify animals

<http://wg.wonderopolis.org/uploads/users/1209/339/...>

<https://www.dkfindout.com/us/animals-and-nature/in...>

<http://www.sheppardsoftware.com/content/animals/ki...>

<https://api.gynzy.com/en/#!/items/science/sorting-...>

Note: Here in the Cleveland Akron area - necessity drove a local musician to invent better sound equipment!! "Do you like effects pedals? We do! Here at EarthQuaker Devices, we like pedals so much that we make them one-at-a-time, by hand, the hard way, in the idyllic post-apocalyptic wasteland metropolis of Akron, Ohio, USA - where the soldering smoke blocks out the sun, and the fiery Cuyahoga River pumps white-hot liquid magma into the steam engine that powers our great riff factory in the sky." <https://www.earthquakerdevices.com/about/>

Standards: [3] SA1.2. [3] SA2.1. [3] SE3.1. 2.1.1.F. [3] SA1.1. L.K.6. RI.K.8. RI.K.10. RF.K.4. SL.K.2. 2.1.1.D. LA 0.4.1.A. 110.11 (F) K.3 (C) SA2. SE1. 110.11 (C) 110.11 (B) LA 0.1.6.O. K.4 (B) (K.9) K.10 (A) RI.K.4. RI.K.2. K.RV.1.1. K.RV.3.2. K.SL.3.1. 0.10.6.6. K.RN.4.1. K.RN.3.2. K.RF.1.1. K.RN.1.1. K.RN.2.1. K.RN.2.2. 0.8.2.2. 0.6.1.1. 0.2.1.1. K.1.K) RI.K.1. RI.K.1 0.2.2.2. 0.2.4.4. 0.3.0.4. 0.2.10.10. 0.2.8.8. SE2. [3] SC4.1. K.RI.RC.12.3. K.C.MC.2.1. K.S.1A.6. K.RI.LCS.11.2. K.RI.MC.6.1. K.RL.P.4.1. K.RL.RC.13.3. K.RI.P.4.1. SE3. L.K.6 RI.K.8 RI.K.4 RI.K.2 RI.K.10 RF.K.4 SL.K.2 W.K.1 K.I.3.1. K.S.1A.8. 3.1. 2.1. 3.2. 5.1. LA 0.1.5.B. SG2. 1.1. SG4. LA 0.1.6.E. LA 0.1.6.D. LA 0.1.5.C. LA 0.1.6.F. LA 0.1.6.I. SF1. LA 0.1.6.M. 1.RF.2.2. [3] SC4.1. 1.RF.2.1. 1.1.1.2. SA2. [3] SE3.1. 1.RF.1.1. SG2. 1.RN.2.2. 1.RN.2.1. 1.RN.4.1. 1.RV.1.1. 1.RV.2.1. 1.RN.1.1. 1.RV.3.2. SE3. SE2. SF1. SG4. 1.SL.3.1. SE1. 1.8.E) 1.19 (C) 1.14 (B) 110.12 (C) 110.12 (D) 110.12 (F) 1.14 (A) 1.6 (C) LA 1.1.6.D. LA 1.1.5.C. LA 1.1.5.B. 1.4 (B) 1.3 (C) 1.1.2.1. 1.RI.RC.12.3. 1.W.MCC.2.1. 1.S.1A.6. 1.S.1A.8. 1.RI.LCS.11.2. 1.RI.LCS.9.1. 1.1.3.1. 1.RL.RC.13.3. 1.RI.MC.6.1. 1.RI.LCS.8.1. LA 1.1.6.E. LA 1.1.6.I. 1.2.6.6. 1.2.7.7. 1.2.4.4. 1.2.2.2. 1.2.1.1. 1.2.8.8. 1.2.10.10. 1.8.7.7.B. 1.8.7.7.A. 1.8.2.2. 1.3.0.4.A. 1.1.A) 1.8.B) LA 1.4.1.A. LA 1.2.1.C. LA 1.1.6.O. LA 1.1.6.M. 2.1.1.D. 2.1.1.F. 1.8.C) 1.8.D) [3] SA2.1. 1.10.G) 1.10.4.4.A. 1.10.F) L.1.4A SL.1.2 RF.1.4C 3.3. [3] SA1.2. RI.1.1. RL.1.5. RF.1.4A RI.1.10 RI.1.2 RI.1.1 RI.1.4 RI.1.6 RI.1.8 RI.1.7 RI.1.2. 2.1. RI.1.10. RI.1.7. RI.1.4. RF.1.4.A. RF.1.4.C. L.1.4.A. SL.1.2. [3] SA1.1. RI.1.6. LA 10.1.6.E. LA 10.1.6.F. LA 10.1.6.H. LA 10.1.5.D. LA 10.1.5.C. E3.RI.LCS.9.5. LA 10.1.4.A. LA 10.1.6.I. E2.I.2.1. E2.RI.MC.5.2. E2.RI.MC.6.1. E2.RI.LCS.8.1. E2.RI.MC.5.1. E2.RI.P.4.3. E4.RI.MC.6.1. E2.RI.P.4.1. E3.RI.LCS.11.2. E3.C.MC.1.1. E1.RI.LCS.9.1. E1.RI.LCS.9.2. E1.RI.LCS.9.3. E1.RI.MC.6.1. E1.RI.MC.5.2. 9-10.RN.2.1. 9-10.RN.1.1. E1.RI.LCS.9.4. E1.RI.LCS.9.5. E4.RI.P.4.3. E4.RI.P.4.1. E4.I.2.1. E1.C.MC.1.1. E4.RI.MC.5.1. E4.RI.MC.5.2. E1.I.2.1. 12.1.3.G. 12.1.3.F. [10] SG4.1. [10] SE3.1. LA 10.1.6.M. SA2. SE1. SE3. SE2. [10] SE1.1. [10] SA1.2. W.9-10.8. RI.9-10.4. RI.9-10.2. L.9-10.4.A. L.9-10.4.D. [10] SA1.1. L.9-10.6. SF1. SG2. 9-10.RV.1.1. LA 10.1.6.O. WHST.9-10.10. LA 10.2.1.C. LA 10.4.1.A. 12.1.2.B. 12.1.2.A. WHST.9-10.9. WHST.9-10.8. RST.9-10.5. RST.9-10.4. SG4. WHST.9-10.2.D. WHST.9-10.4. WHST.9-10.7. WHST.9-10.6. RI.9-10.1. 9-10.RV.2.1. 110.47.9 (E) 110.47.8 (D) 110.47.8 (B) 110.48.1 (A) 110.48.2 (A) 110.48.4 (E) 110.48.3 (A) 110.48.2 (F) 110.47.8 (A) 110.47.7 (A) 110.47.2 (A) 110.47.1 (A) 110.46.1 (A) 110.47.3 (D) 110.47.4 (C) 110.47.6 (C) 110.47.6 (A) 110.47.5 (B) 110.48.4 (F) 110.48.5 (A) 110.55.4 (B) 110.55.4 (A) 110.55.3 (C) 110.55.4 (C) 110.55.4 (D) 9-11.11 (C) 110.55.5 (B) 110.55.5 (A) 110.55.3 (B) 110.55.3 (A) 110.49.2 (B) 110.48.6 (C) 110.48.6 (A) 110.53.3 (B) 110.54.3 (A) 110.55.2 (C) 110.54.5 (B) 110.54.5 (A) 110.34 (B) 110.34 (A) WHST.9-10.6. WHST.9-10.7. WHST.9-10.8. WHST.9-10.4. WHST.9-10.2(D) EI.1 (A) RST.9-10.4. RST.9-10.5. WHST.9-10.9. WHST.9-10.10. 10.3.F) 9-10.W.1.1. 9-10.RV.2.2. 10.5.F) 10.5.H) E1.RI.P.4.1. E1.RI.P.4.3. E1.RI.MC.5.1. (EI.8) 110.31 (A) 110.33 (B) 110.33 (A) EIII.15 (C) (V) EIV.1 (A) EIV.1 (B) EIV.15 (C) (V) EIV.9 (D) (EIV.8) EIII.9 (B) EIII.1 (B) (EII.8) EII.1 (A) 110.31 (B) EII.9 (B) 110.32 (A) EIII.1 (A) 110.32 (B) 12.1.3.H. 9-10.RN.2.2. E2.RI.LCS.9.4. 9.5.1.1. E2.RI.LCS.9.5. E2.C.MC.1.1. E3.I.2.1. 9.5.2.2. 9.5.4.4. 9.11.4.4.D. 9.11.4.4.A. 9.9.7.7.B. 9.7.8.8. E3.RI.P.4.1. E3.RI.P.4.3. E3.RI.LCS.9.4. E3.RI.LCS.9.3. W.9-10.8 RI.9-10.4 RI.9-10.2 E3.RI.LCS.9.2. E3.RI.LCS.9.1. E3.RI.MC.5.1. E3.RI.MC.5.2. E3.RI.MC.6.1. E3.RI.LCS.8.1. 9.11.6.6. 9.1.1.1.2. E4.RI.LCS.9.3. E4.RI.LCS.9.4. E4.RI.LCS.9.2. E4.RI.LCS.9.1. E4.RI.LCS.8.1. E4.RI.LCS.9.5. E4.RI.LCS.11.2. L.9-10.4A L.9-10.4D L.9-10.6 E4.C.MC.1.1. 9.14.10.10. 9.14.9.9. 9.1.3.4.1. 9.1.2.1.2. 9.1.2.1.1. 9.1.1.2.4. 9.13.4.4. 9.13.5.5. 9.14.8.8. 9.14.7.7. 9.14.4.4. 9.14.2.2.D. RI.9-10.1 9.1.2.1.3. E2.RI.LCS.9.1. E2.RI.LCS.9.3. E2.RI.LCS.9.2. RI.11-12.2 RI.11-12.1