**Welcome to AP CSP!**

**Today's physical handouts: Code.org Syllabus, Student/Parent Contract, Safety/Behavior Contract**

Student information form : [https://docs.google.com/forms/d/e/1FAIpQLScJHTPTGxT-k7XeukVkuGcMWUGfXN0HYu1qjrFJnrm-Xr6xKA/viewform?usp=sf\_link](https://docs.google.com/forms/d/e/1FAIpQLScJHTPTGxT-k7XeukVkuGcMWUGfXN0HYu1qjrFJnrm-Xr6xKA/viewform?usp=sf_link%20)

Parent/Student Contract: [https://drive.google.com/file/d/1WM5sWOR8HQxAJiF10nJD4H8zrN-los0t/view?usp=sharing](https://drive.google.com/file/d/1WM5sWOR8HQxAJiF10nJD4H8zrN-los0t/view?usp=sharing%20)

BLOWN TO BITS: <https://www.niemanlab.org/pdfs/blowntobits.pdf>

- Chapter 1 pg 1-17: digital explosion :In teams, create a 10-15 picture presentation of the material covered : **We will work on the following mini-project later this week:**

|  |  |  |
| --- | --- | --- |
| **CONCEPT** | **Required pictures** | **Required explanation** |
| **BIG Idea(s) of Chapter 1** | 1-2 pictures to represent | Explanation (in text) |
| BIG Idea(s) of Roan 1 | 1-2 pictures to represent | Explanation (in text) |
| BIG Idea(s) of Roan 2 | 1-2 pictures to represent | Explanation (in text) |
| BIG Idea(s) of Roan 3 | 1-2 pictures to represent | Explanation (in text) |
| BIG Idea(s) of Roan 4 | 1-2 pictures to represent | Explanation (in text) |
| BIG Idea(s) of Roan 5 | 1-2 pictures to represent | Explanation (in text) |
| BIG Idea(s) of Roan 6 | 1-2 pictures to represent | Explanation (in text) |
| BIG Idea(s) of Roan 7 | 1-2 pictures to represent | Explanation (in text) |
| BIG Idea(s) of Roan 8 | 1-2 pictures to represent | Explanation (in text) |
| **Reflection of Chapter 1** | 1-2 pictures to represent | Explanation (in paragraph text) |

OUR CLASS CODE= \_\_\_\_\_\_\_



Logging in to [www.code.org](file:///I:\APCSP\WEEK%201%20Agenda\www.code.org)

1) Use your ramsmail address for this.

2) Your username should be First, Last initial

3) WRITE DOWN your password in the back flap of your notebook!!

4) Use our class code and look for our picture.

Take the CS Principles Pre-survey (28 questions), do not forget to submit at the end! I will verify your submission.

APCSP **Unit 1 CHAPTER 1**: 7 lessons total:

|  |  |  |
| --- | --- | --- |
| Lesson 1: Personal Innovations | -Video: Computer science is changing everything: <https://studio.code.org/s/csp1-2019/stage/1/puzzle/2> 5:34min  -Activity guide: personal innovations (shorten to student brainstorming in teams, then present on whiteboards). | Day completed (tentative... as we go along)  1/8/20 |
| Lesson 2: Sending Binary Messages | -U/P Activity: "on" or "off".. sending messages (students have access to lights, sounds makers, etc to answer questions in binary).  -VOCAB: binary and bit  - turn down computer sounds, log in to code.org and answer the two questions for lesson 2. | 1/8/20 |
| Lesson 3: Sending Binary Messages with the Internet Simulator | -Demonstration: Flashlight binary signal Test  -VOCAB: Bandwidth, Bit, Bit Rate, Latency, Protocol  - Video: Internet Simulator part 1 <https://www.youtube.com/watch?v=Kn6Fd5uwZno&feature=youtu.be> 3:24 min  -Activity Guide: Coordination and Binary Messages  -Video: Wires, cables, and wifi <https://www.youtube.com/watch?v=ZhEf7e4kopM> 6:41 min  -Worksheet: video guide for "wires, cables, and wifi" [https://docs.google.com/document/d/1HV43TpdujP3jDvBaTeJWAmtco3bT41ewkQsEd0ECgZM/edit?usp=sharing](https://docs.google.com/document/d/1HV43TpdujP3jDvBaTeJWAmtco3bT41ewkQsEd0ECgZM/edit?usp=sharing%20%20) | 1/8/20  HOMEWORK= read "BLOWN to bits"  CHAPTER 1 |
| Lesson 4: Number Systems | -Team mini project: Chapter 1 of "Blown to Bits"  -Activity Guide: circle, triangle, square [https://docs.google.com/document/d/1y\_hQDmwzUAbXUHe1xhGpTQr9uiGcXYZTX9EAAmnzuDM/edit?usp=sharing](https://docs.google.com/document/d/1y_hQDmwzUAbXUHe1xhGpTQr9uiGcXYZTX9EAAmnzuDM/edit?usp=sharing%20)  -- turn down computer sounds, log in to code.org and answer the two questions for lesson 4. | 1/9/20 |
| Lesson 5: Binary Numbers | -Activity: Flipptiy do [https://docs.google.com/document/d/1XdvoPdn9nPFbtvyPtnESNB0OJlQ\_TTPzNWZ8vW0GwX8/edit?usp=sharing](https://docs.google.com/document/d/1XdvoPdn9nPFbtvyPtnESNB0OJlQ_TTPzNWZ8vW0GwX8/edit?usp=sharing%20) use bubble 2  -Activity: Binary Practice [https://docs.google.com/document/d/1N5DABsZkJUd1EPB0OCEb4suxqD\_oGShaGDAheGRuJSY/edit?usp=sharing](https://docs.google.com/document/d/1N5DABsZkJUd1EPB0OCEb4suxqD_oGShaGDAheGRuJSY/edit?usp=sharing%20%20)  -- turn down computer sounds, log in to code.org and answer the two questions for lesson 5.  Khan video: Binary, hex, and decimal conversions: <https://www.youtube.com/watch?v=_97OwCkjh3c>  -Worksheet: conversions: Binary, hex, and decimal practice  [https://docs.google.com/document/d/1X8WU8ip3P08AmhwTW-wd2jOXzFbcZT7cH-dhljIcfrc/edit?usp=sharing](https://docs.google.com/document/d/1X8WU8ip3P08AmhwTW-wd2jOXzFbcZT7cH-dhljIcfrc/edit?usp=sharing%20) | 1/9/20  HOMEWORK= finish conversion practice worksheet. |
| Lesson 6: Sending Numbers | -Whiteboard presentations: conversions  -Short Quiz: Lessons 1-5  -VOCAB: protocol  -Video: The internet simulator part 2 <https://www.youtube.com/watch?v=cIk2R0QuXkI&feature=youtu.be&list=PLzdnOPI1iJNdVYhNyXeP4FsbSH_AkUhxB> 3:12  -Activity Guide: Sending numbers **(PARTNERS!)** [https://docs.google.com/document/d/1rriJv6ldYtCi989aEzXERlKz1hx3HhaP62bAw9NkCkU/edit?usp=sharing](https://docs.google.com/document/d/1rriJv6ldYtCi989aEzXERlKz1hx3HhaP62bAw9NkCkU/edit?usp=sharing%20)  -Worksheet: Sending numbers for Graphing **(PARTNERS!)** [https://docs.google.com/document/d/1SUzZVPoSiQSsIRmxhBw3XTFUnzpFJrqYm5bmxoiA2UE/edit?usp=sharing](https://docs.google.com/document/d/1SUzZVPoSiQSsIRmxhBw3XTFUnzpFJrqYm5bmxoiA2UE/edit?usp=sharing%20)  - turn down computer sounds, log in to code.org and answer the two questions for lesson 6 | 1/10/20 |
| Lesson 7: Sending Text | -VOCAB: Abstraction, ASCII, Protocol  Reference Sheet: ASCII <https://docs.google.com/document/d/1zVNfx_6LBJBdRyTC4EVDPDLLahhmZY7yVKpX3vcrtWw/edit?usp=sharing> | 1/10/20 |
| Unit 1 Chapter 1 Assessment |  | 1/10/20  HOMEWORK= do assessment and read Ch 2 of "Blown to Bits" |

**\*\*\*\*Unit 1 Chapter 1 student resources:**

The Binary DOG! <https://www.youtube.com/watch?v=xkG1UlXGQtA>

ASCII code chart:  <https://en.wikipedia.org/wiki/ASCII#ASCII_printable_code_chart>

HTML5:  <https://www.w3schools.com/html/>

ASCII -Hex- Symbol:  <https://ascii.cl/>

APCSP **Unit 1 CHAPTER 2**: lessons 8-14 , 7 lessons total:

|  |  |  |
| --- | --- | --- |
| Lesson 8: The Internet | -VOCAB: IETF, Internet, Net Neutrality  -Handout: The internet is for everyone [https://docs.google.com/document/d/1M52G0fDMr9RdA5TK2por3lVYSIhrDAN0YcDL6DNuMKY/edit?usp=sharing](https://docs.google.com/document/d/1M52G0fDMr9RdA5TK2por3lVYSIhrDAN0YcDL6DNuMKY/edit?usp=sharing%20) and full version [https://docs.google.com/document/d/1Al\_BU1ZVkPnYH8LFyLfXenqm2kl\_RtIROkmoq69l5P0/edit?usp=sharing](https://docs.google.com/document/d/1Al_BU1ZVkPnYH8LFyLfXenqm2kl_RtIROkmoq69l5P0/edit?usp=sharing%20)  -Video: What is the internet? <https://www.youtube.com/watch?v=Dxcc6ycZ73M> 3:44  -Whiteboard presentations: reflections on lesson 8  - turn down computer sounds, log in to code.org and answer the 10 questions for lesson 8 | Day completed (tentative... as we go along)  1/13/20 |
| Lesson 9: The Need for Addressing | -VOCAB: IP address, Packets, Protocol  -Activity Guide: Battleship game board [https://docs.google.com/document/d/1lJSJrZ9io\_KihHj0sFdDurWKWMfaGx4-iRVxjMy8kBE/edit?usp=sharing](https://docs.google.com/document/d/1lJSJrZ9io_KihHj0sFdDurWKWMfaGx4-iRVxjMy8kBE/edit?usp=sharing%20)  -Activity Guide: Battleship game rules [https://docs.google.com/document/d/16\_1b\_oeQrzovuSUwpFl7uJUOiuI4UcuoxNqG0TY5nng/edit?usp=sharing](https://docs.google.com/document/d/16_1b_oeQrzovuSUwpFl7uJUOiuI4UcuoxNqG0TY5nng/edit?usp=sharing%20)  -Video: Internet Simulator part 3 <https://www.youtube.com/watch?v=x_YTEBRnR1U&feature=youtu.be> 1:20  -Activity Guide: Invent a binary protocol for Battleship  [https://docs.google.com/document/d/1-Z4DXtXNCb82uAafCSN3crAopUoqayuIjDwv5THnzQQ/edit?usp=sharing](https://docs.google.com/document/d/1-Z4DXtXNCb82uAafCSN3crAopUoqayuIjDwv5THnzQQ/edit?usp=sharing%20)  -Vint Cerf speaks : Internetworking Protocol <https://www.youtube.com/watch?v=5o8CwafCxnU&feature=youtu.be> 8:23 min  - turn down computer sounds and answer bubbles 4-8 | 1/13/20  HOMEWORK= IP addresses and DNS  [https://docs.google.com/document/d/11Jh9CJZQxJlMUrj4YO1bsqJgqRxq6dQc661F6aSJRf8/edit?usp=sharing](https://docs.google.com/document/d/11Jh9CJZQxJlMUrj4YO1bsqJgqRxq6dQc661F6aSJRf8/edit?usp=sharing%20) |
| Lesson 10: Routers and Redundancy | -VOCAB: Network Redundancy, Router  -Activity Guide: Routers and Redundancy [https://docs.google.com/document/d/1TmWoSzqpE-WhSeVDwtVMOEQP5Ndux8dSlCveW4CaDx4/edit?usp=sharing](https://docs.google.com/document/d/1TmWoSzqpE-WhSeVDwtVMOEQP5Ndux8dSlCveW4CaDx4/edit?usp=sharing%20)  -Team activity, using an Updated Internet Simulator  - turn down computer sounds and answer bubbles 3-7 | 1/14/20 |
| Lesson 11: Packets and Making a Reliable Internet | VOCAB: Packets, TCP  -Video: Packets, Routing, and Reliability <https://www.youtube.com/watch?v=AYdF7b3nMto&feature=youtu.be> 4:37min  -Activity Guide: Packets and making a reliable internet [https://docs.google.com/document/d/1W31BCyOi2WPpOg6XYM-NBauKn84C9uBor5XTs5aMHCg/edit?usp=sharing](https://docs.google.com/document/d/1W31BCyOi2WPpOg6XYM-NBauKn84C9uBor5XTs5aMHCg/edit?usp=sharing%20)  **-Challenge:** Develop a protocol for reliably sending a message across an unreliable network (bubble 2)  - turn down computer sounds and answer bubbles 4-7 | 1/14/20  HW= Read "Blown to Bits" Chapter 2 |
| Lesson 12: The Need for DNS | -Very short quiz on BTB reading  -VOCAB: DNS  Video: The Internet- IP addresses and DNS <https://www.youtube.com/watch?v=5o8CwafCxnU&feature=youtu.be> 6:44min  -Worksheet: Names and Addresses <https://docs.google.com/document/d/1CNUR6wAWIBN5h04fkbEkJTYLWwjC9BbvygpdK5iNS6o/edit?usp=sharing>  -Activity Guide: DNS partner questionnaire <https://docs.google.com/document/d/1J1EJOZEtpY_FcJvz1Czt6aoret74LDu9J4dSeU8ZwM4/edit?usp=sharing>  -Internet Simulator  -Activity Guide: Student research on DNS in the real world, students assigned 1 article each.  - turn down computer sounds and answer bubbles 4-7 | 1/15/20  HW= finish DNS real world research project |
| Lesson 13: HTTP and Abstraction | -VOCAB: DNS, HTTP, IP Address, TCP, URL  -Video: HTTP and HTML <https://www.youtube.com/watch?v=kBXQZMmiA4s&feature=youtu.be> 7:06  -Handout: HTTP and Abstraction on the Internet <https://docs.google.com/document/d/16xR4B_97y-OSoVmPHs2cappK6znzfGg0F_YADHo43SQ/edit?usp=sharing>  -Worksheet: HTTP in Action  [https://docs.google.com/document/d/199TMxixFrV58mgMr1QnruUAyxjgss0lTuOtfd\_s6TLM/edit?usp=sharing](https://docs.google.com/document/d/199TMxixFrV58mgMr1QnruUAyxjgss0lTuOtfd_s6TLM/edit?usp=sharing%20)  - turn down computer sounds and answer bubbles 3-5 | 1/16/20 |
| Lesson 14: Practice PT - The Internet and Society | -Activity: 4-5 minute Flash Talk  <https://docs.google.com/document/d/14vYQZ-M_zce09c0ePEKzuQDsr4b1RQHf9Q46jENAQvk/edit?usp=sharing> | 1/16/20  HW= present your flash talk to FlipGrid |
| Unit 1 Chapter 2 Assessment | 10 question assessment in AP format | 1/17/20 |