

Test Book Materials

Physical Science II

Best illustrated chapters. Please refer to the Opens tax textbooks:

<https://open.umn.edu/opentextbooks/BookDetail.aspx?bookId=22>

<https://ocw.mit.edu/courses/chemistry/5-12-organic-chemistry-i-spring-2005/>

<https://openstax.org/details/chemistry>

<https://cnx.org/contents/RTmuIxzM@8.3:uXg0kUa-@4/Introduction>

Contents:

1. *Atoms and periodic properties*

Different fields of study contributed to the development of a model of the atom.

Please refer to:

<https://www.youtube.com/watch?v=Gy9HR65DpYQ>

<https://www.youtube.com/watch?v=q--2WP8wXtk>

<https://www.youtube.com/watch?v=ywqg9PorTAW>

https://www.youtube.com/watch?v=IFKnq9QM6_A

<https://www.youtube.com/watch?v=fLSfgNxoVGk>

2. *Chemical bonds*

Electron structure will explain how and why atoms join together in certain numbers.

<https://www.youtube.com/watch?v=7DjsD7Hcd9U>

<https://www.youtube.com/watch?v=VSc491HLzDo>

<https://www.youtube.com/watch?v=OTgpN62ou24>

https://www.youtube.com/watch?v=_M9khs87xQ8

<https://www.youtube.com/watch?v=KjoQHqgzda8>

<https://www.youtube.com/watch?v=OTgpN62ou24>

3. *Chemical reactions*

Chemical symbols, formulas, and equations can be used to concisely represent elements, compounds, and what happens in a chemical reaction

<https://www.youtube.com/watch?v=aMU1RaRulSo>

<https://www.youtube.com/watch?v=5rtJdjas-mY>

<https://www.youtube.com/watch?v=IZ1tKxsqV74>

<https://www.youtube.com/watch?v=yA3TZJ2em6g>

<https://www.youtube.com/watch?v=jy6F0Lbvjm8>

4. *Water and solutions*

Water and solutions of water have unique properties

<https://www.youtube.com/watch?v=AN4KifV12DA>

<https://www.youtube.com/watch?v=9h2f1Bjr0p4>

<https://www.youtube.com/watch?v=iWOnCH8m5ug>

<https://www.youtube.com/watch?v=AOqH5ktwoDE>

<https://www.youtube.com/watch?v=XC1RxloV0Mo>

5. *Organic compounds*

The nature of the carbon atom allows for a great variety of organic compounds, many of which play vital roles in living.

<https://www.youtube.com/watch?v=MmWZ8vGz9zQ>

<https://www.youtube.com/watch?v=zUN2nIVHiyU>

<https://www.youtube.com/watch?v=cMTRB1K6Scg>

<https://www.youtube.com/watch?v=gP8H7xj97pA>

<https://www.youtube.com/watch?v=0WAV47hsCpY>

<https://www.youtube.com/watch?v=OOcFFJ-s0p4>

<https://www.youtube.com/watch?v=7fv8GETEOu8>

<https://www.youtube.com/watch?v=IC57cJzM8OA>

6. *The universe*

The night sky is filled with billions of stars, and the Sun is an ordinary star with an average brightness.

<https://www.youtube.com/watch?v=mO3Q4bRQZ3k>

<https://www.youtube.com/watch?v=lkEvS4QUFeY>

<https://www.youtube.com/watch?v=XSVjakILf24>

<https://www.youtube.com/watch?v=Qd6nLM2QIWw>

<https://www.youtube.com/watch?v=jpMyjPJ9HFg>

7. *The solar system*

The solar system is composed of the Sun and orbiting planets, dwarf planets, and small solar system bodies.

<https://www.youtube.com/watch?v=Qd6nLM2QIWw>

<https://www.youtube.com/watch?v=jpMyjPJ9HFg>

<https://www.youtube.com/watch?v=95NCtnMRuBs>

<https://www.youtube.com/watch?v=B-b4XvuQo1Y>

<https://www.youtube.com/watch?v=TKM0P3XIMNA>

<https://www.youtube.com/watch?v=0ytyMKa8aps>

8. *Earth in space*

The way the Earth moves in space is used to define time and describe location on the surface, and causes other recurrent phenomena such as seasons.

<https://www.youtube.com/watch?v=n4IhCSMkADc>

<https://www.youtube.com/watch?v=EPyl1LgNtoQ>

<https://www.youtube.com/watch?v=Un5SEJ8MyPc>

<https://www.youtube.com/watch?v=mve7hRaoH8U>

<https://www.youtube.com/watch?v=6v2L2UGZJAM>