

## Seventh Grade

### כיתה ז

#### ADVISORY

The seventh grade advisory program focus on goal-setting and reflection, on the students' management of their own affairs, and on building community. Special programs incorporated within the advisory rubric in seventh grade include a *tzedakah* program produced by the American Jewish World Service entitled "Where Do You Give?"; an exploration of Jewish values as a means of assessing and enhancing the class's functioning as a community; planning and preparation for a three-day educational trip to Washington, D.C.; and the first half of a year-long high school preparation program. The 7th grade Health curriculum focuses on human sexuality and also approaches the issues of substance abuse and peer pressure in the context of the Jewish idea of *Kavod Ha'Briot* (human dignity). The seventh grade community service project is volunteering at West Side Campaign Against Hunger, where students stock shelves and help out with other tasks at the food bank. Students also use part of their advisory sessions to work on developing their Portfolios and preparing for Portfolio Conferences. The advisory teacher conferences regularly with each student to help monitor his or her academic and personal progress and to address any individual concerns.

## ART

Seventh grade art studies begin looking into perspective by creating a landscape moving back in space. This is followed by a still life unit: drawing shaded objects, learning about Cubism through still life and making digital still life drawings using “Sketchbook Express” on ipads. In a unit on abstraction students learn to look at and understand abstract art. They create a series of works using ipads and art supplies. In a collaboration with music, their abstract work goes to music where they pair the art to a wide range of musical styles. In the spring semester the seventh grade explores the topic of Tzedakah in both study and art. In their Advisory classes they learn about charity in many forms from source texts. They used this knowledge as the basis to create original Tzedakah boxes. The boxes are displayed for the whole school to see. In the final unit, students explore micrography, the art of using letters to create a picture. Students select a text of their choice to design and fill their designs with Hebrew and English texts and letters.

Museum trip: Jewish Museum, Whitney, Guggenheim or MET.

## HEBREW עברית

Hebrew is taught on different levels in Middle School. The beginners’ curriculum – *Bishvil Ha'Ivrit* book 1 is designed for students with no or very little knowledge of Hebrew. In this program, students learn to speak in short dialogues about daily life; write paragraph-length personal narratives, memos, and assertions of opinion; and read

stories, folk tales, and descriptive or informational non-fiction texts. The language structures that they learn to recognize and use include singular and plural forms; masculine and feminine forms; present tense and infinitives; four of the seven verb patterns (*binyanim*); the basic possessive forms; prepositions; nominal clauses; and word order in sentences.

The intermediate curriculum – *Bishvil Ha'Ivrit* books 2-3 is a two/three-year sequence that is typically studied by students entering seventh and eighth grade in Jewish day schools. In this program, students learn to speak in longer dialogues about a wide range of subjects and in interviews; write letters; and read longer short stories, non-fiction texts, essays, and simple songs, poems, and biblical passages. The language structures that they learn to recognize and use include the basic future tense; all seven verb patterns (*binyanim*); declension of several prepositions; noun-adjective agreement in gender and number; nominal, verbal, and object clauses; parts of speech; and word order.

The advanced curriculum – *Bishvil Ha'Ivrit* books 4-5 is a two/three-year sequence that is typically studied by students entering ninth and tenth grade in Jewish day schools. In this program, students learn to speak freely in conversation on any topic; read news articles in easy Hebrew, full-length short stories partially adapted to easy Hebrew, and poetry, songs, biblical verses, and *midrashim*; write multi-paragraph narratives, reports, and essays; and understand TV or radio news items. The language structures that they learn to recognize and use include the future tense in four *binyanim* (verb patterns),

declension of prepositions, gerunds, past participles, possessives, suffixes, and conditional clauses.

## **HUMANITIES**

“A Living Democracy: The American System of Politics and Law” is the theme of the humanities core curriculum in seventh grade. Beginning with today’s events, students look at how democratic values and structures are reflected in the upcoming November elections. The various branches of government are studied with an emphasis on the current elections. The students conclude the first unit on Election Day participating in a series of public debates on issues relevant to the election year and to their lives.

The focus of study next shifts to the eighteenth century. Students read the Articles of Confederation, selected Federalist and Anti-Federalist Papers, and the Constitution. In connection with their study of these documents, they practice writing persuasive essays of their own.

Next, students examine the way political expression is embedded in literature. They read Ayn Rand’s *Anthem* as a class, analyzing the text for the ways in which Rand portrays the systems and structures of government and society. Then they select an independent novel and examine the ways in which the author portrays society, specifically in the context of when the novel was written. They discuss their analysis and conclusions about their chosen issue in an extended research paper, with a creative

component, and present their thesis in an exhibition before members of the wider school community.

The enduring legacy of the Constitution and Bill of Rights to American politics and law form the basis of the following unit of study. After reading "Inherit the Wind," students complete a constitutional project, in which students are given the facts of a First Amendment case and information about relevant Supreme Court precedent. In a culminating role play, students address the constitutional question they have researched by simulating oral arguments before the Supreme Court, taking on the roles of Supreme Court justices and attorneys.

As part of a cross-curricular unit with Jewish studies, seventh grade students study the Holocaust with a focus on life in the ghettos during the Holocaust, and the events of Kristallnacht. Students explore the history through a close reading of essays as well as a memoir read in book clubs.

The curriculum incorporates other experiences with literature, as well: independent reading, a unit on short stories, newspaper and magazine articles, and additional essays. The students' writing experiences, both in connection with the theme and independent of it, take the form of a writing workshop, in which students write using the writing process, complete multiple drafts of each assignment, and share their writing through a . Grammar, spelling, and varied word choice are taught directly and reinforced continuously.

## JEWISH STUDIES

The seventh grade Torah curriculum covers selected chapters of *Sh'mot* (Exodus) and *B'midbar* (Numbers), commencing with the Golden Calf incident and concluding with the rebellion led by *Korach*. In addition to the skills learned in previous years, seventh graders learn to work their way through the Hebrew text with limited vocabulary support, put themselves in the shoes of the biblical characters, and ask larger philosophical questions about the text.

In the second year of Talmud study, seventh graders explore some classic *sugyot* from *N'zikin* (the Order of Civil and Criminal Law) and *Mo'ed* (Jewish holidays). These passages range in topic from whether the *mitzvah* of being in the *sukkah* applies during the day as well as the night or just the day, to the death penalty, to the *mitzvah* of honoring and respecting one's parents. Students become increasingly familiar with Aramaic vocabulary and language patterns during the year, and the amount of Aramaic in each passage reflects this growth. Additionally, some students learn how to use a Steinsaltz Talmud with a complete Hebrew and Aramaic text, and some go on to use a traditional Vilna Shas text, which has no punctuation or vowels. The structure of the *sugyah* also grows in complexity, and the logical connections between parts of the text

later in the year often need to be inferred; the flow and style of argumentation between the rabbis becomes increasingly implicit and complex, as well. Students become less reliant on vocabulary lists for common terms, learn to map out the flow of the argument by filling in and constructing charts and diagrams, grow in their ability to analyze and explain the various lines of argument, and develop question-posing skills.

Students explore the history of the modern State of Israel through historic speeches, documents, and song. Through these cultural elements, students gain perspective on each of the periods since 1948.

The second half of the *B'nei Mitzvah* program is taught in seventh grade. Students learn the art and craft of preparing a d'var Torah, comparing medieval and modern commentaries on the *parashah* and making personal connections to the text. They also undertake a second *mitzvah* project, this time relating to an interpersonal *mitzvah* (*bein adam la'chaveiro*). They again research a *mitzvah* of their choice and practice it over an extended period, keeping a reflective journal. The *mitzvah* project culminates in an extensive research paper that they share with their classmates.

The *t'filah* program continues to expand and diversify in seventh grade. Students learn two entirely new prayer services this year: *Shacharit* (the morning prayer) and *minchah* (the afternoon prayer) for *Shabbat*. In addition, several new prayers are added for the conclusion of the daily morning service following the *Amidah*. Students who become *bar* or *bat mitzvah* this year, or during the preceding summer, have their first experiences of assuming full responsibility for the leadership of a *minyan* as *chazanim*. Students

continue to read Torah in middle school *minyan*, and some students also serve as *gabbaim*.

In seventh grade, the focus of study prior to the *chagim* (Jewish holidays) shifts to Maimonides' Code of Jewish Law. In many cases, his novel insights and approaches to understanding familiar practices and concepts provoke surprise, heated debate, and unexpected pleasure. For example, students encounter two different and apparently incompatible descriptions of the process of repentance, an account of the history of *Chanukah* and the nature of the miracle that differs from everything else students have learned in the past, and a surprising choice of how best to express the joyousness of the holiday on Purim and other *chagim*. Students develop their understanding of the *halakhic* process.

## **MATH**

In math, the seventh grade program focuses on proportional reasoning and its applications and includes an introduction to linear algebra. Students apply ratios to compare geometric figures, prices, rates, slopes and probabilities. Symbolic solutions to proportions lead into formal algebra.

Beginning from an in-depth review of numerical operations and proceeding to properties of operations (commutative, associative, and distributive), variables, signed numbers, and linear geometry, students are prepared with all of the content components they will



need to proceed to a fully elaborated Algebra I program in eighth grade. During the year, students prepare an exhibition on ratios and proportions. Student select real-life problems whose solution requires the use of ratios and proportions and present their applications in oral exhibitions to members of the wider school community. They then defend their presentations by responding to “warm” and “cool” questions from the learning community.

With continuing frequent “math workouts,” students gain speed, efficiency, and accuracy in performing calculations and solving rote problems. Working alone and in groups on problem sets and projects, students are responsible for learning skills and assessing their own needs.

Key focal points for the year include: Connecting rate and ratio to multiplication and division and performing operations on all rational numbers; Developing an understanding of and applying proportionality, including similarity; Modeling situations with linear equations and applying them to answer questions.

The following topics are studied in seventh grade:

- Numerical operations
- Variables
- Similar figures; scaling geometric figures
- Ratio, proportion, and percent
- Using the identity property
- Using the commutative, associative, and distributive properties

- Operations using positive and negative integers; graphing in four quadrants
- Plotting on coordinate graphs
- Linear relationships – graphing and equations
- Three-dimensional geometry – surface area and volume
- Probability, data analysis, and game theory

## **CODING**

Students in seventh grade use physical and computer-based tools to explore the world of functional coding. The coding curriculum builds upon their knowledge of the main elements and structures of code, such as sequence, conditionals, variables, and loops, and functions. Students develop and rehearse their skills through “unplugged” activities and computer-based exercises. From there, students explore practical applications for computer programming, such as website building, game design, and programming microcontrollers (MicroBits and Arduino boards). Students expand their knowledge of circuitry through breadboarding. Students learn how to connect lights, motors, and sensors to these devices and program them to create electronic projects and robots that respond to real world problems. Students use both block based and text based-programming and explore languages such as HTML, CSS, JavaScript, and C++.

## **SCIENCE**

The seventh grade science curriculum offers students the opportunity to explore the overarching theme of the year: Systems. Students study this theme through different

branches of science (life and physical) to determine the role of systems in helping to maintain homeostasis.

The majority of these explorations are conducted through hands-on experimentation and activities. Students continue to use the scientific method to design and carry-out experiments to test their hypotheses and deepen their understanding of the topics of study. In addition, students also complete a variety of STEAM and engineering challenges to explore these topics through different lenses.

Topics in the seventh grade science curriculum include:

The Human Body

Chemistry: Atoms and Molecules

DNA and Heredity

In the Human Body unit, students study the digestive and cardiovascular systems, focusing on the structures, functions of parts, and the roles of organs and organ systems in maintaining homeostasis. Students explore how a heart pumps blood, how food is broken down in the body, and how muscles and chemical reactions work to control the body. Students use their findings as “jumping off points” to create STEAM design challenges (such as devices that mimic functions of body systems).

In a project-based Chemistry unit, content is structured around the question: How can we use our understanding of chemical properties and reactions to create special effects for short films?. During the unit, students study the organization of Periodic Table of

Elements and learn about the structure of atoms and molecules. Students learn to classify and describe matter based on chemical and physical properties and look for evidence of chemical reactions. Observation and measurement skills are emphasized. As a culminating project, students write and produce short films that use chemical properties and reactions to create special effects.

In the DNA, Heredity, and Genetics unit, students learn about the structure of DNA, how it copies, and its role in the development and function of living things. They create models and participate in experiments, such as extracting DNA from fruit, to deepen their understanding of this topic. The section on genetics and heredity addresses how traits are inherited. Students learn about dominant and recessive traits, the probability of inheritance, and mutations.

Each unit encourages active learning through observation, deductive reasoning based on observation, experiment, research, hypothesis formation and testing, and scientific writing.

In addition to the content, skills, and processes addressed in these units of study, students also participate in a long-term interdisciplinary STEAM (science, technology, engineering, art, and math) project. Throughout the process, students are asked to identify real world problems, and then research, plan, build, test, and revise their solutions. Skills and values addressed through this project are empathy, the engineering design process, and designing with a client in mind.

## **MUSIC**

The seventh grade music program introduces a new instrument, the ukulele. This string instrument provides a great entry point to learning guitar, since its body is smaller and strings are soft. The students learn basic left and right hand technique, as well as tuning and strumming rhythms. As they progress, the students develop a repertoire of chords and learn to apply them to songs. In theory, they continue to work on musical notation and are introduced to group composition, arrangement, and lyric writing. Music appreciation focuses on characteristics of different genres and styles, including classical, jazz, and pop, with a focus on melody. In addition to learning new Hebrew and English songs, the students work on dynamics and singing two-part harmonies.

## **PHYSICAL EDUCATION**

Seventh grade PE is a highly competitive, yet friendly, environment. At this point, the students have a strong skill set and understanding of sport; thus, students are encouraged to take on a more leadership role in PE. They learn how to set up the games, referee the games, keep score of the games, and even create new games!