

A Review of Healthy Kids Challenge® Educational Resources Using GENIE: A Guide for Effective Nutrition Interventions and Education

Description of GENIE

GENIE, designed by the Academy for Nutrition and Dietetics is a rigorously validated tool for designing, modifying or comparing nutrition education programs. It is created for nutrition education program planners, program reviewers and funders. GENIE identifies nine categories with 35 quality criteria to include in planning effective nutrition education programs.

Healthy Kids Challenge® (HKC) uses the most current evidence-based information in the design of resources for comprehensive school nutrition education; food education and food literacy for after school and community youth programs. Training and resources support multiple environments (school classrooms, food service, community youth programs) and scope (from a full comprehensive curriculum to nutrition activities).

All **Balance My Day™** curricula include **MyPlate** and are based on *Dietary Guidelines for Americans*. Classroom lessons are aligned with HECAT - HE (Centers for Disease Control Health Education Analysis Tool-Healthy Eating) standards and integrate math, science and language arts. Every classroom lesson also has a **Move and Learn** activity that connects nutrition and physical activity. Other curriculum activities and resources round out a comprehensive approach:

- Optional **Taste and Learn** enhancement activities are included after each unit. These activities that offer kids hands on preparation of simple recipes work great in or out of the classroom.
- A school nutrition services section with activities and promotions strengthens the connection between the cafeteria to classroom learning and supports the HealthierUS School Challenge.
- Reproducible parent tip handouts reinforce classroom learning. To strengthen the parent connection and promote family meals, the same "Taste and Learn" recipes kids prepare are formatted for family serving sizes and available as reproducible pages in a downloadable format.
- Healthy eating and physical activity are promoted to build positive attitudes for healthy choices.

Schools and youth programs receive support to identify and adapt tools according to their needs and resources. As an example:

- HKC has and is in the process of training, support, and providing resources for local and major statewide education initiatives (TEAM Nutrition and University Extension).
- HKC has given training and support to help community libraries support health messages.

The following information, presented in the GENIE framework, identifies the concepts, strategies, and alignment based on standards identified in health education analysis tools.

GENIE Category 1:

Feasible

The content is designed to be adaptable based on time and staff availability. As a comprehensive nutrition education curriculum, it is preferable to teach the thirty – 20 minute classroom lessons consecutively once or twice a week. The content has been adapted by physical educators, with less time available. Each lesson has defined components: a) presentation and discussion of knowledge based information; b) a hands on activity; c) a *Move and Learn* Activity. Community afterschool programs have demonstrated they can easily implement one of these components each time the class or group meets until the lesson is completed.

Well-timed

The content is designed to make learning and practicing skills for healthy eating choices appealing and fun for kids in multiple settings.

Novel

The content is designed for comprehensive interventions, from classroom *Move and Learn* activities to hands on *Taste and Learn* activities that connect basic food preparation with nutrition education and beyond the classroom to school nutrition services connected lessons.

Target Group, intended audience for intervention

The primary HKC target audiences are childcare providers, school nutrition staff, classroom teachers (K-8) and community youth leaders. In the community, HKC target audiences extend beyond youth organizations to leaders who are organizing events for families of children. Examples of these highly motivating educational events are [Explore MyPlate](#) and [Ready, Set, Cook and Eat](#).

The content, for the use by these target audiences, is designed for all kids from Pre-K through 8th grade, regardless of weight. Studies show that most kids do not eat in a way to maintain good health.

Health Literacy

The content is designed for health literacy. At the younger age levels images are incorporated for better literacy. *Parent Tips* are generally written at a six to eighth grade level and are available in English or Spanish. Classroom activities are written to be inclusive of all socio-economic groups. A glossary of words and subject matter background information are provided for reference by those leading the lessons. The content is aligned with CDC Health Education Analysis Tool (Healthy Eating) standards, Dietary Guidelines for Americans, and MyPlate.

Related Research

Learning strategies are founded on effective health behavior education and environmental change models, i.e., social cognitive theory and the socio-ecological model. HKC incorporates a **HEAR – SEE – DO – approach** (Kids HEAR a healthy message; SEE how to make healthy choices; and DO – have hands-on practice of healthy habits) based on.

Social cognitive theory: Components of the social cognitive theory have been widely applied and tested among community and school-based interventions designed to promote health behaviors in children and adolescents (Botvin, Eng, & Williams, 1980; Perry, Kelder, & Klepp, 1994; Perry, Killen, Telch, Slinkar, & Danaher, 1980).

Self-efficacy (confidence in being able to achieve wellness goals) and self-regulatory skills: An extensive body of research has documented that self-efficacy is an important mediator of health behavior (e.g., Colletti, Supnick, & Payne, 1985; Condiotte & Lichtestein, 1981; Holman & Lorig, 1992; Strecher, DeVellis, Becker, & Rosenstock, 1986). Thus, although the model itself is difficult to test (Fisher & Fisher, 2000), empirical support for components of the model and the usefulness of the model in designing health promotion programs is well documented.

The curriculum is designed for kids to practice self-regulatory skills such as recognizing hunger and choosing balance between eating and physical activity. Developing self-efficacy skills is incorporated by having children understand realistic goal setting¹ and rehearse or practice the behaviors that lead to the ability to practice health promoting behaviors.

¹Goal Setting References:

Cullen KW et al. Goal Setting is Differentially Related to Change in Fruit, Juice, and Vegetable Consumption Among Fourth-Grade Children. *Health Educ & Behav*, 2004; Vol. 31, No. 2, 258-269

Cullen KW, et al, Using goal setting as a strategy for dietary behavior change. *J Am Diet Assoc*. 2001 May; 101(5):562-6.

Shilts et al, An Innovative Approach to Goal Setting for Adolescents: Guided Goal Setting. *J Nutr Educ Behav.* 2004; 36:155-156.

Best Practices

As guided by the CDC best practices set forth by HECAT-HE¹, Coordinated School Health², and Characteristics of Effective Health Education Curriculum³, supporting resources and the curriculum

- Focus on clear health goals and related behavioral outcomes. Instructional strategies and learning experiences are directly related to the behavioral outcomes.
- Content is research-based and theory-driven. Instructional strategies and learning experiences built on social cognitive theory that has effectively influenced health-related behaviors among youth. The curriculum goes beyond the cognitive level and addresses health determinants, social factors, attitudes, values, norms, and skills that influence specific health-related behaviors.
- Addresses social pressures and influences. The curriculum provides opportunities for students to analyze personal and social pressures such as media influence and peer pressure.
- Builds personal competence, social competence, and self efficacy by addressing skills, including communication, refusal, assessing accuracy of information, decision-making, planning and goal-setting, self-control, and self-management — that enable students to build their personal confidence, deal with social pressures, and avoid or reduce risk behaviors.
- Provides functional knowledge that is basic, accurate, and directly contributes to health-promoting decisions and behaviors.
- Uses strategies designed to personalize information and engage students. Lessons are student-centered, interactive, and experiential including group discussions, cooperative learning, problem solving, role playing, and peer-led activities. Instructional strategies and learning experiences include methods for addressing key health-related concepts that are age and developmentally appropriate. Learning is relevant and applicable to daily lives.
- Content is free of culturally biased information.
- Provides adequate time for instruction and understanding of key health concepts and repetition for practicing skills.

- Provides opportunities to reinforce skills and positive health behaviors. It builds on previously learned concepts and skills and provides opportunities to reinforce health-promoting skills across health topics and grade levels.
- Provides opportunities to make positive connections with influential others by engaging peers, parents, families, and other positive adult role models in learning.
- The curriculum includes teacher information. Workshops provide professional development and training that enhance effectiveness of instruction and student learning. Staff and personal wellness plans develop teachers who have a personal interest in promoting positive health behaviors, believe in what they are teaching, are knowledgeable about the curriculum content, and are comfortable and skilled in implementing expected instructional strategies. Ongoing support is available for professional development and training for helping teachers implement a new curriculum or implement strategies that require new skills in teaching or assessment.

¹CDC, HECAT-HE http://www.cdc.gov/healthyyouth/HECAT/index.htm?s_cid=tw_ah443

²CDC, Coordinated School Health <http://www.cdc.gov/HealthyYouth/cshp/>

³CDC, Characteristics of Effective Health Education Curriculum

<http://www.cdc.gov/healthyyouth/SHER/characteristics/index.htm>

Needs Assessment

It is well documented that healthy eating and physical activity behaviors are key to prevention of chronic diseases including diabetes, heart disease, high blood pressure and stroke. According to CDC Coordinated School Health, “The healthy development of children and adolescents is influenced by many societal institutions.” and “The health of young people is strongly linked to their academic success, and the academic success of youth is strongly linked with their health. Thus, helping students stay healthy is a fundamental part of the mission of schools.” (Centers for Disease Control and Prevention http://www.cdc.gov/healthyyouth/health_and_academics/index.htm)

Healthy Eating

- At the beginning of the school year students were neutral to hesitant about having fruits and vegetables for snacks during the school day. At the end of the year 95-100% of students were excited about receiving them at snack times.
- Following intervention, students continued to demonstrate more positive attitudes about trying the unfamiliar fruits and vegetables. When asked to name a variety of snacks, students name fruits and vegetables primarily.
- Parents reported to school staff that their children were trying more fruits and vegetables at home.
- School food service used the data to identify preferences and find alternate ways of serving the fruits and vegetables that did not receive high preference ratings.
- 9 of 13 teachers interviewed reported at least a 50% increase in the amount of healthy food sent in response to healthy suggestions; 4 of the 9 reported a 70% improvement.

Surveys [pre-(n=96) and post-(n=79)] indicated positive trends with student-family interactions:

- 62.5%-pre-survey compared to 70.9%-post survey of 4th and 5th graders said that in the last week they had asked a family member to be physically active or do a sport with them.
- 62.5%-pre-survey compared to 72% post-survey of 4th and 5th graders said that in the last week they had asked a family member to prepare a fruit or vegetable for a meal.

Classroom Minutes of Motion

9 of 13 classroom teachers posted survey results:

- Importance of providing physical activity opportunities: 100% rated this as 4-important (22%) or 5-very important (78%)
- Feasibility of providing classroom opportunities for physical activity: On a scale of 1-5
 - 5-Very feasible: 44%
 - 4: 22%
 - 3: 11%
 - 2: 11%
 - 1-Not feasible: 11%
- Reported strategies used by respondents:
 - 89% integrated movement into classroom lessons
 - 56% used brain breaks
 - 67% used physical activity as a reward
 - 22% used other strategies

In another 471 student Elementary School in VA, staff reports classrooms are getting more physical activity and learning more about nutrition. Over a one year period:

- 100% of classroom teachers integrated nutrition into the core curriculum.
- 100% of classroom teachers added 5-15 minutes of physical activity per day. That added up to 25-75 extra minutes of physical activity each week!
- Over 32% of teachers increased their own steps goals by walking before school each day.

GENIE Category 9

Elements that may increase program's expectation to continue existing resources, stakeholder buy-in, target group adoption include.

- Healthy Kids Challenge provides training and support to adapt implementation to multiple environments and availability of resources.
- Training includes staff wellness for stakeholder buy-in.
- The curriculum provides the educator with background information for concepts and talking points.
- Trivia at the beginning of each K-5 unit provides content for fun school or program wide "messaging."
- Nutrition lessons are interactive, hands on, fun and have "real life" application. In addition lessons integrate or are very adaptable to integrating application of other core curriculum.
- Group questions and discussions facilitate students' current level of learning and so progress with the learning and skill development.



About Healthy Kids Challenge®

Healthy Kids Challenge® (HKC) is a nationally recognized, award winning program.

Healthy Kids Challenge® trains and provides resources, including nutrition curriculum and activities, to teachers and youth leaders. HKC's unique approach of "Hear – knowledge based information; See-see how to make and then practice decision making skills; and Do (set and meet goals for healthy behaviors) has helped make a healthy difference for kids across the United States.

Healthy Kids Challenge® resources align with the Healthy Out-of-School Time Framework. The curriculum, *Balance My Day*, aligns with both the recommendations set forth by the Academy of Nutrition and Dietetics' GENIE tool (A Guide for Effective Nutrition Interventions and Education) and the Centers for Disease and Prevention Health Education Analysis Tool – Healthy Eating (HECAT-HE).

Healthy Kids Challenge® resources have been assessed and recommended by recognized nutrition education agencies such as Illinois NET (Nutrition Education Training), the Los Angeles Unified School District, and Indiana TEAM Nutrition. HKC has also been on the advisory board for the development of the CDC Health Education Analysis Tool (HECAT) – Healthy Eating and provided consultation and development of resources for the Cooper Institute's Nutri-Gram and the Fuel Up to Play 60 program.

In addition, collaborative work is in progress with Ohio State University Extension in implementing and evaluating a comprehensive nutrition education approach (environment, education, policy) in the classroom, after school, and summer programs.